TE OF UTAH

SUBMIT IN TRIPLICATE*
(Other ons on
re)

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1 a. TYPE OF WORK DRILL [X] DEEPEN [ ]

b. TYPE OF WELL OIL WELL [ ] GAS WELL [ ] [X] OTHER - COALBED METHANE SINGLE ZONE [ ] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR
ANADARKO PETROLEUM CORPORATION

3. ADDRESS AND TELEPHONE NO.
17001 Northchase Drive, Houston, Texas 77060 281/875-1101

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
At surface
615 106
2017 FSL & 676 FEL, SE Section 31, T13S R10E **CONFIDENTIAL**
At proposed prod. zone
2017 FSL & 676 FEL, SE Section 31, T13S R10E

5. LEASE DESIGNATION AND SERIAL NO. Chubbuck 95

6. IF INDIAN, ALLOTTEES OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME WELL NO. Chubbuck A-1

9. API WELL NO.

10. FIELD AND POOL OR WILDCAT Helper CBM

11. SEC. T,R,M, OR BLK. AND SURVEY OR AREA Section 31, T13S R10E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE.
2 miles N of Price, Ut

12. COUNTY Carbon **13. STATE** Utah

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 676'

16. NO. OF ACRES IN LEASE 192'

17. NO. OF ACRES ASSIGNED TO THIS WELL. 160

18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE. FT.

19. PROPOSED DEPTH 3100'

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5875' GR

22. APPROX. DATE WORK WILL START. 1/28/97

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	8 5/8"	24	300'	200 cu. ft.
7 7/8"	5 1/2"	17	3100'	300 cu. ft.

Attached is the following:
1. Survey Plat
2. Drilling Plan with BOP Schematic.
3. Surface Use Plan.
4. Topo & Access Map & Area Map.
5. Pit & Pad Layout with cross sections of pit, pad, & rig layout.
6. Self-Certification of Operator.
7. Sundry Notice - Location Exception

The Cultural Resource Study will be submitted under separate cover.

CONFIDENTIAL

IN ABOVE SPACE, DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED [signature] TITLE Dave Hudspeth, Staff Drilling Engineer DATE 5/9/97

(This space for Federal or State office use.)

PERMIT NO. 43-007-30352 APPROVAL DATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations theron.
CONDITIONS OF APPROVAL IF ANY:

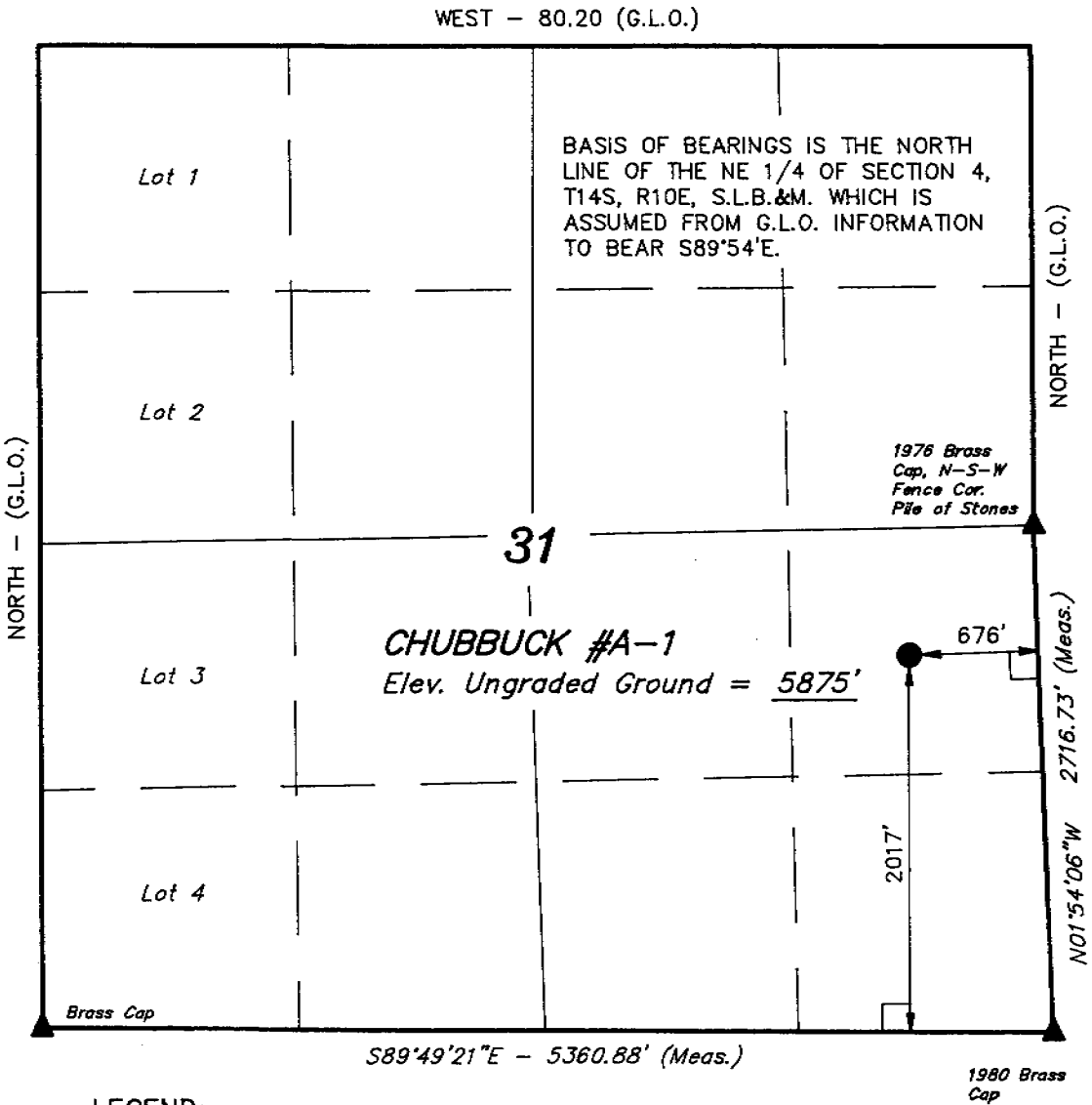
APPROVED BY [signature: John R. Baza] TITLE Associate Director DATE 3/24/98

See Instructions On Reverse Side

ANADARKO PETROLEUM CORP.

Well location, CHUBBUCK #A-1, located as as shown in the NE 1/4 SE 1/4 of Section 31, T13S, R10E, S.L.B.&M. Carbon County, Utah

T13S, R10E, S.L.B.&M.

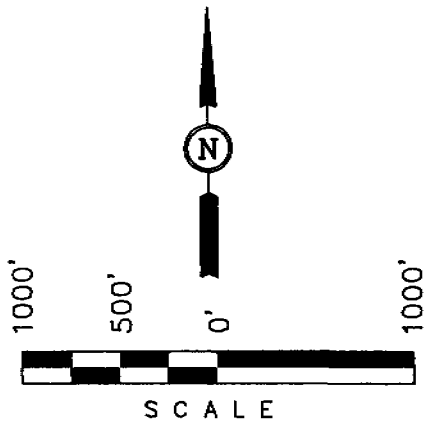


LEGEND:

- ∟ = 90° SYMBOL
- ● = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

BASIS OF ELEVATION

SPOT ELEVATION NEAR THE SOUTHEAST CORNER OF SECTION 34, T13S, R10E, S.L.B.&M. TAKEN FROM THE HELPER QUADRANGLE, UTAH, CARBON COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 6350 FEET.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Robert L. Kay

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST - VERNAL, UTAH 84078
(801) 789-1017

SCALE	DATE SURVEYED:	DATE DRAWN:
1" = 1000'	10-22-96	11-1-96
PARTY: D.K. K.S. C.B.T.	REFERENCES: G.L.O. PLAT	
WEATHER: COOL	FILE: ANADARKO PETROLEUM CORP.	

DRILLING PLAN
TO ACCOMPANY APPLICATION FOR PERMIT TO DRILL

Company: Anadarko Petroleum Corporation

Well: Chubbuck A-1

Location: 2017' FSL & 676' FEL
SE/4, Sec 31-T13S-R10E

Lease: Chubbuck 95

Surface Elevation: 5875' GR

A. Estimated Tops of Important Geologic Markers:

GEOLOGIC MARKER	DEPTH
Mancos / Emery	Surface
Bluegate Shale	1475'
Ferron Sandstone	2475'
Ferron Coal Top	2505'
Base of Ferron Coal	2655'
Tununk Shale	2705'

B. Estimated Depth at which Water, Oil, Gas or other Mineral-Bearing zones are expected to be encountered:

Gas-bearing Ferron Coal is expected to be encountered from 2505'-2655'.

All fresh water zones and prospectively valuable mineral zones encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

C. Pressure Control Equipment:

A 9" 3000 psi WP double gate hydraulic BOP with pipe rams and blind rams will be installed on the 8-5/8" casinghead. The BOP stack will be tested prior to drilling below surface casing. The ram preventers will be tested to 70% of the working pressure of the casinghead. The annular will be tested to 50% of its working pressure. Operational checks will be made daily or on trips. A BOP schematic is shown on attached Exhibit "A".

The BOP system will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventer controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order. This inspection will be recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs. The accumulator system will meet IADC guidelines concerning pump capacities, storage capacity, and reservoir volume. Closing unit fluid volume will be sufficient to pre-charge the system to operating pressure plus 50% excess. One set of controls will be in the doghouse on the rig floor and one set will be remote on the drilling pad.

D. Casing Program

Surface Casing - 8-5/8" casing will be set at approximately 300'.

Production Casing - 5-1/2" casing will be set at approximately 2400' if well is to be completed.

	SIZE	WT./FT.	GRD.	THRD.	CONDITION
Surface	8-5/8"	24.0	K-55	8rd	New
Production	5-1/2"	17.0	K-55	8rd	New

Casing Design Factors

The safety factors on casing strings will equal or exceed the following values:

Collapse	1.0
Joint Strength	1.6
Burst	1.33

Cement Program

Surface - Cement will be circulated to the surface. Casing will be cemented with approximately 200 cu. ft. of API Class 'G' cement.

Production - Casing will be cemented with approximately 300 cu. ft. of API Class 'G" cement. The actual cement volume will be based upon hole depth and gauge, and will be determined from logs.

Additional additives will be used to retard the cement, accelerate the cement, control lost circulation, or control fluid loss. All cementing will be done in accordance with API cementing practices.

E. Mud Program and Circulating Medium:

Fresh water circulated through the reserve pit will be used for drilling the 12-1/4" surface hole to 300'. An air or air/mist system will be used for drilling from below surface pipe at 300' to TD.

The mud system will be visually monitored.

A truck-mounted air drilling rig may be used to drill the surface hole to 300' and to pre-set the surface casing before moving a drilling rig on location to drill the rest of the hole to TD.

Sufficient mud materials will be stored at the wellsite to maintain mud requirements and to control minor well control or lost circulation problems.

F. Coring, Logging, and Testing Program:

a. Rotary sidewall coring in the Ferron Sandstone interval (2505'-2655') may be performed, depending upon shows and hole conditions.

b. DST's may be run depending upon shows.

c. The following logging program is planned:

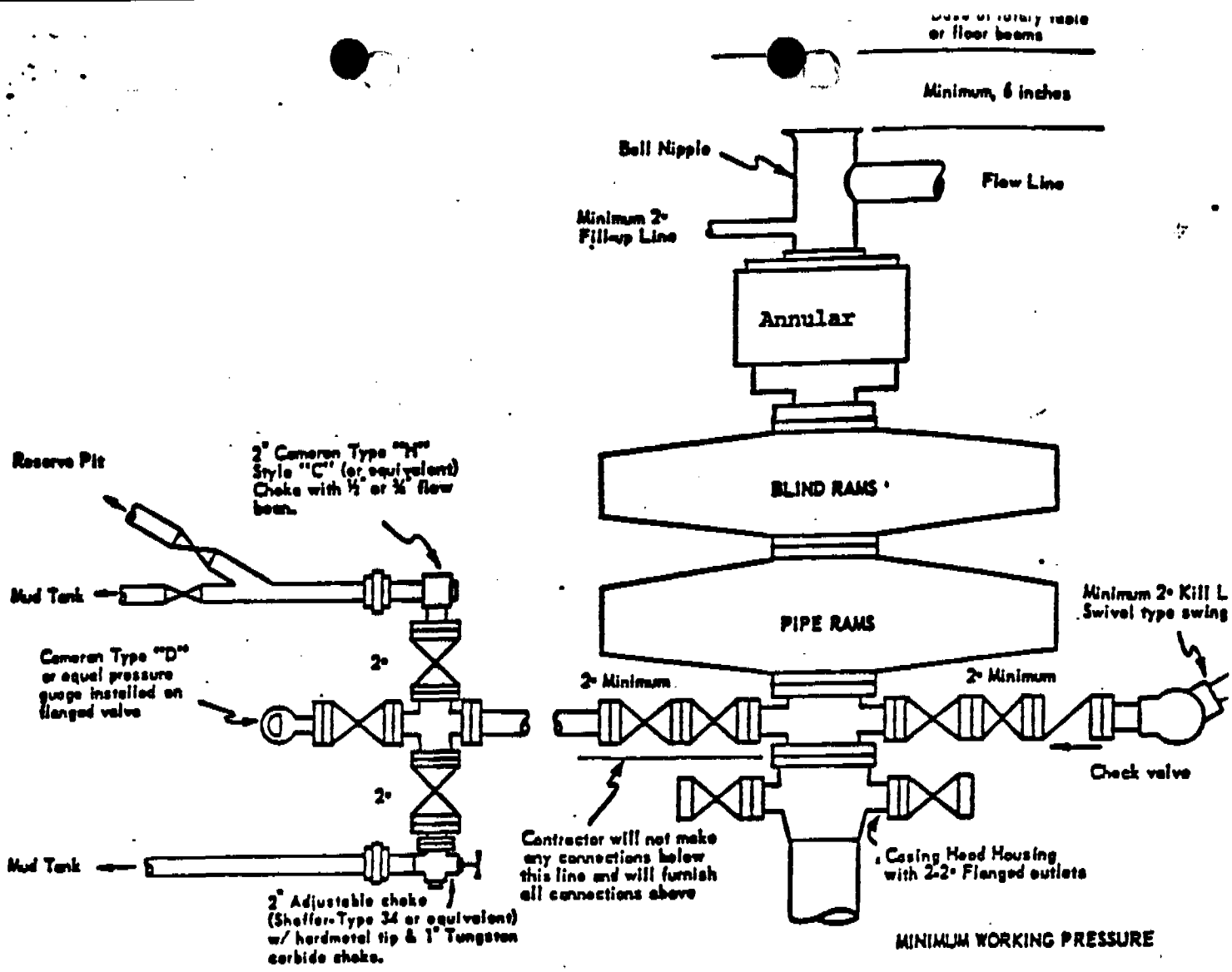
1. DIL-ML-SP-GR-CAL over prospective intervals.
2. SDL-CNL-GR-CAL over prospective intervals.

d. A mud logging unit with chromatograph will be used from approximately 2000' to TD.

e. Productive zones will be swab tested. Water produced during testing will be contained in the temporary reserve pit. All produced oil will be stored and sold. Gas will be flared during testing.

G. Abnormal Conditions and Potential Hazards:

Abnormal conditions such as abnormal temperatures or pressures are not anticipated. Potential hazards such as H_2S are also not anticipated.



Anadarko
Petroleum Corporation

MINIMUM BLOWOUT PREVENTER REQUIREMENTS - NORMAL PRESSURE SERVICE

SURFACE USE PLAN
TO ACCOMPANY APPLICATION FOR PERMIT TO DRILL

Anadarko Petroleum Corporation
Chubbuck A-1
2017' FSL & 676' FEL, SE Sec 31, T13S, R10E
Carbon Co., Utah

1. Existing Roads: See Map A and Map B.

   a. Location of proposed well in relation to town or other reference point: Location is approximately 2.0 miles north of Price, Utah.

   b. Proposed route to location: (See Map "A" for marked access).

   c. Location and description of roads in the area:
   (See Map "A" and Map "B").

   d. Plans for improvement and/or maintenance of existing roads: The existing roads will be maintained in the same or better condition as existed prior to the commencement of operations.

2. Planned Access Roads:

   a. The existing and proposed roads will be crowned, ditched or dipped from the existing County road to the location prior to use for moving the drilling rig onto the site. The maximum disturbed width will not exceed 30' with an eighteen foot running surface. Dust will be controlled by the use of water or an approved dust retardant. All roads, including access to drilling water, will be maintained in as good or better condition than existing condition.

   b. Maximum grades: Maximum grade will be less than 10%.

   c. Turnouts: None planned.

   d. Location: Access to the location uses an existing road up to the location. New road that will be constructed for access off of the existing road is flagged. (See Map B).

   e. Drainage: The road surface will be center crowned with ditches on each side of road. Slopes will have a maximum slope of 3:1.

   f. There will be no culverts placed in the ditchways during the drilling phase of operations. Further evaluation will be made for the additions of culverts if the road is to have long-term use.

   g. Surface materials (source): Surface materials will most likely not be required to be transported to the access road or drillpad for construction purposes. However, if gravel is required, the dirt contractor will be responsible for locating and permitting of any necessary construction material.

3. Location of Existing Wells: (2 mile radius)

The proposed Chubbuck A-1 location is approximately 1 mile north of the proposed Birch A-1.

4. Location of Tank Batteries and Production Facilities:

All permanent (on site for six months or longer) structures constructed or installed (including oil well pumpjacks) will be painted a flat, non-reflective, earthtone color to match the standard environmental colors, as determined by the Rocky Mountain 5-State Interagency Committee. This will include all facilities except those required to comply with O.S.H.A. (Occupational Safety and Health Act) regulations. These will be painted the color stipulated by O.S.H.A. All facilities will be painted within six months of installation.

Gas meter runs for each well, if needed, will be located within 500 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and 500 feet downstream of the meter run or any production facilities. Meter runs will be housed and/or fenced.

The oil and gas measurement facilities will be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Test for meter accuracy will be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. The State of Utah will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to State of Utah. All meter measurement facilities will conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.

5. Location and Type of Water Supply:

Water supply for drilling and completion purposes will be furnished by a water hauler.

Water supply will be obtained from either the Price River or from Willow Creek.

6. Source of Construction Material:

Native material will be used for road surfacing and pad construction.

Should additional construction material be required, it will be the responsibility of the dirt contractor to locate and permit (if necessary) use of that material.

7. Methods of Handling Waste Disposal

The reserve pit will be lined.

Produced waste water will be confined to a lined pit for a period not to exceed 90-days after initial production.

Trash will be confined in a covered container and hauled to an approved landfill. Burning of waste or oil is not approved, and spoil material will be kept on site for recontouring.

No bore holes will be used for disposal of waste materials. Human waste will be contained and will be disposed of at an approved sanitary landfill.

8. Ancillary Facilities:

Not applicable for drilling operations in this area.

9. Wellsite Layout:

A plat showing access to the well-pad and the location of the reserve pit are attached.

The location and access road will be cleared of trees prior to any construction. Stumps will be scattered or buried in an area designated by the State of Utah. Any stump left in place will be cut so that the stump height does not exceed 12 inches. All slash less than four inches in diameter will be chipped or scattered outside the cleared area and must be within 24 inches of the ground at all points. All material four inches in diameter or greater will be removed. All of the above will take place prior to placement of drilling facilities.

Topsoil and vegetation will be stripped together to a depth of 6 to 8 inches and stockpiled by wind-row on the northeast edge of the location. No topsoil stripping will be allowed when soils are moisture saturated to a depth of 3 inches, or frozen below the stripping depth.

The reserve pit will be fenced on three sides prior to drilling activity and closed off on the fourth side after drilling is finished. Fencing will be four strands of barbed wire or 48-inch woven wire with one strand of barbed wire above the woven wire. All corners will be braced with a wooden H-type brace. The fence construction will be on cut or undisturbed ground and the fence will be maintained in a livestock tight condition.

10. Plans for Restoration of Surface:

The State of Utah will be notified at least 24-hours prior to commencing reclamation work.

Immediately upon completion of drilling, the location and surrounding area will be cleared of all debris, materials, trash, and junk not required for production.

Before any dirt work to restore the location takes place, the reserve pit must be completely dry and all cans, barrels, pipe, etc. will be removed.

If the well is a producer:

Unneeded areas of the location will be reclaimed as soon as the reserve pit has dried. Upgrade and maintain the access roads as necessary to prevent soil erosion and accommodate year-round traffic. Reshape areas unnecessary to operations, rip or disk on the contour, and seed all disturbed area outside the work area according to the seed mixture specified below. Save the topsoil for use during final reclamation unless the site can be recontoured to blend with the natural topography as required for final abandonment. Perennial vegetation must be established. Additional work will be required in case of seeding failures. All permanent facilities placed on the location will be painted to blend with the natural environment.

If the well is abandoned/dry hole:

Restore the access road and location to blend with the natural topography. During reclamation of the site, push the fill material into cuts and up over the backslope. Leave no depressions that will trap water or form ponds. Distribute topsoil evenly over the location and seed according to the above seed mixture. The access road and location will be ripped or disked prior to seeding.

Prepare seed-bed by contour cultivating four to six inches deep. Drill seed 1/2 to 1 inch deep following the contour. In areas that cannot be drilled, broadcast seed at 1.5 times the application rate and cover 1/2 to 1 inch deep with a harrow or drag-bar.

Fall seeding will be completed after September 1 and prior to ground frost. Spring seeding will be completed after the frost has left the ground and prior to June 1.

11. Other Information:

There will be no deviation from the proposed drilling and/or workover program without prior approval. Safe drilling and operating practices must be observed.

"Sundry Notice and Report on Wells" will be filed for approval for all changes of plans and other operations.

The dirt contractor will be provided with an approved copy of the surface use plan.

An archaeology inspection will be performed by an authorized contractor. Their report on this inspection will be sent directly to the State of Utah.

The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sties, or for collecting artifacts or fossils. The Operator will immediately bring to the attention of the State of Utah any and all antiquities or other objects of historic or scientific interest including, but not limited to, historic or prehistoric ruins, artifacts, or fossils discovered as a result of operations under this permit. The operator will immediately suspend all activities in the area of the object and will leave such discoveries intact until told to proceed by the State of Utah. Notice to proceed will be based upon evaluation of the cultural significance of the object. Evaluation will be by a qualified professional. When not practical, the Operator will follow the mitigation requirements set forth by the State of Utah concerning protection, preservation, or disposition of any sites or material discovered. Within five working days the State of Utah will inform the Operator as to:

Whether materials appear eligible for the National Register of Historic Places;

the mitigation measure(s) the Operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and,

a time frame for the State of Utah to complete an expedited review to conform, through the State Historic Preservation Officer, that the findings are correct and that mitigation is appropriate.

If the Operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the State of Utah will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, in those situations where the State of Utah determines that mitigation, data recovery and/or salvage excavations are necessary, the Operator will bear the cost. The State of Utah will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the State of Utah that the required mitigation has been completed, the Operator will then be allowed to resume construction.

12. Lessee's or Operator's Representatives and Certification:

REPRESENTATIVE

Name: Dave Hudspeth
Phone: 281/874-8814

Address: Anadarko Petroleum Corporation
17001 Northchase Drive
Houston, Texas 77060

CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route, that I am familiar with the conditions which currently exist, that the statements made in this plan are to the best of my knowledge, true and correct, and that the work associated with the operations proposed herein will be performed by

ANADARKO PETROLEUM CORPORATION

and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

12-May-97
Date

Dave Hudspeth
Staff Drilling Engineer

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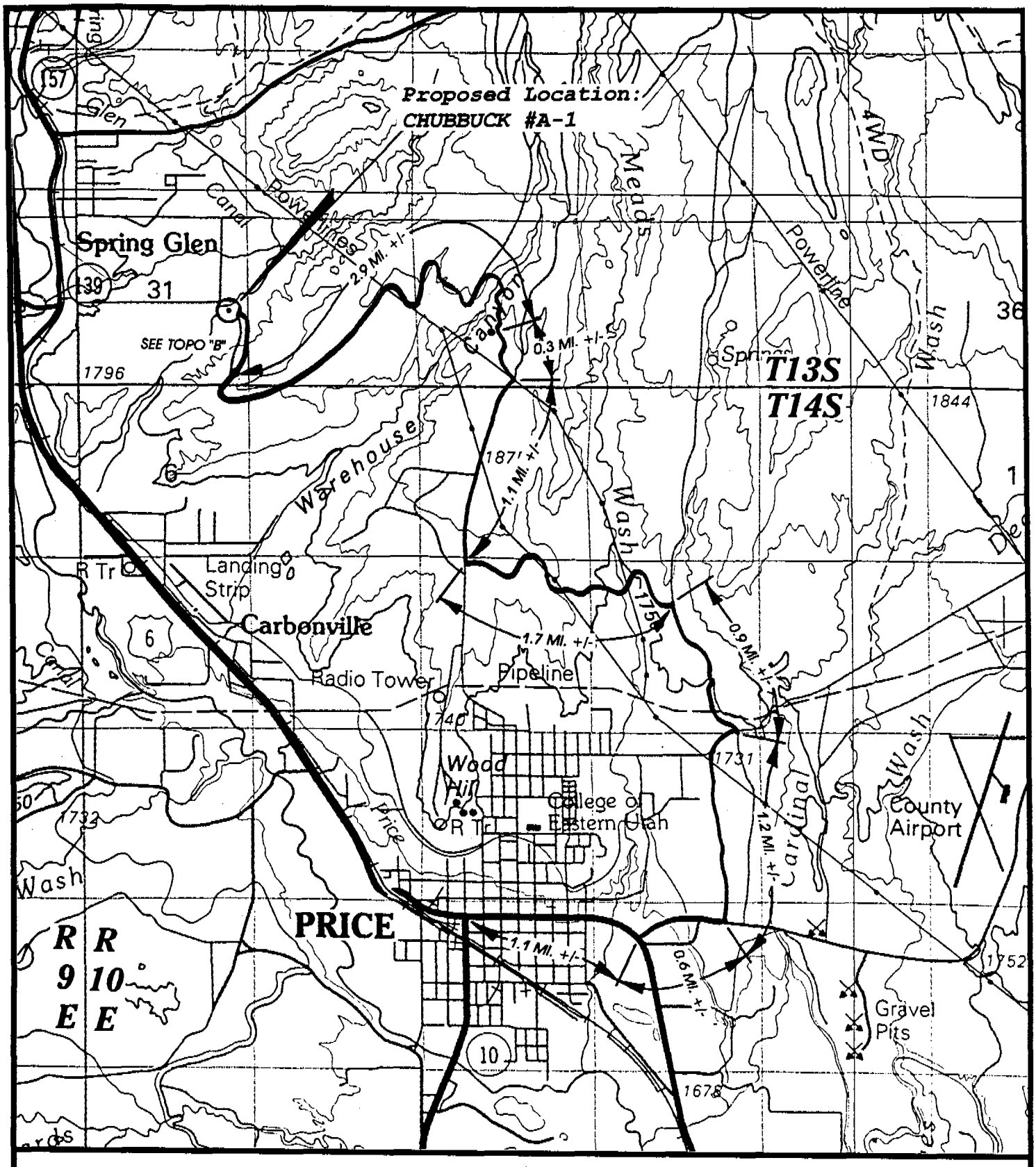


TOPOGRAPHIC MAP "A"

DATE: 11-4-96
Drawn by: D.COX

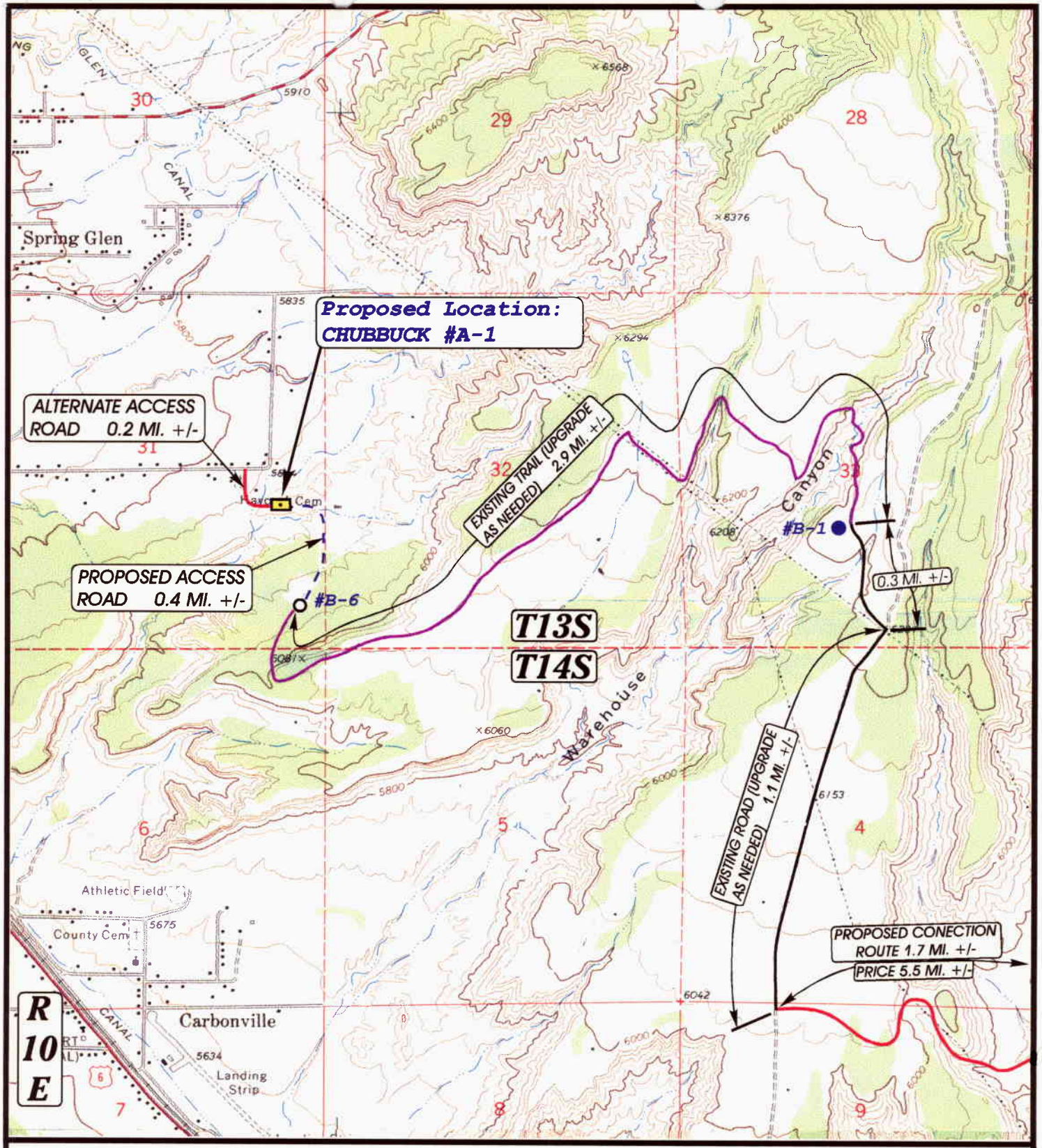
UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East • Vernal, Utah 84078 • (801) 789-1017

N

SCALE: 1" = 4000'

ANADARKO PETROLEUM CORP.

CHUBBUCK #A-1
SECTION 31, T13S, R10E, S.L.B.&M.
2017' FSL 676' FEL



TOPOGRAPHIC MAP "B"

DATE: 11-4-96
Drawn by: D.COX

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85 So. 200 East • Vernal, Utah 84078 • (801) 789-1017

SCALE: 1" = 2000'

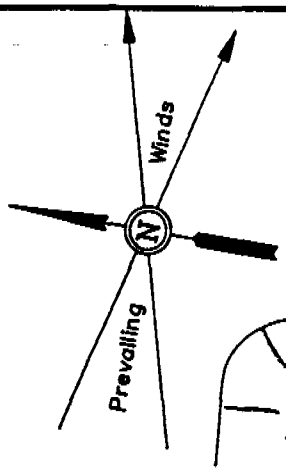
ANADARKO PETROLEUM CORP.

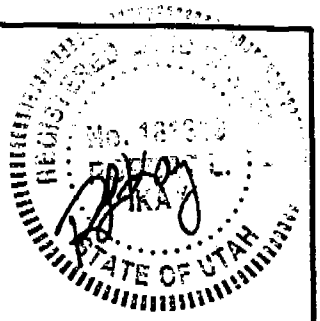
CHUBBUCK #A-1
SECTION 31, T13S, R10E, S.L.B.&M.
2017' FSL 676' FEL

ANADARKO PETROLEUM CORP.

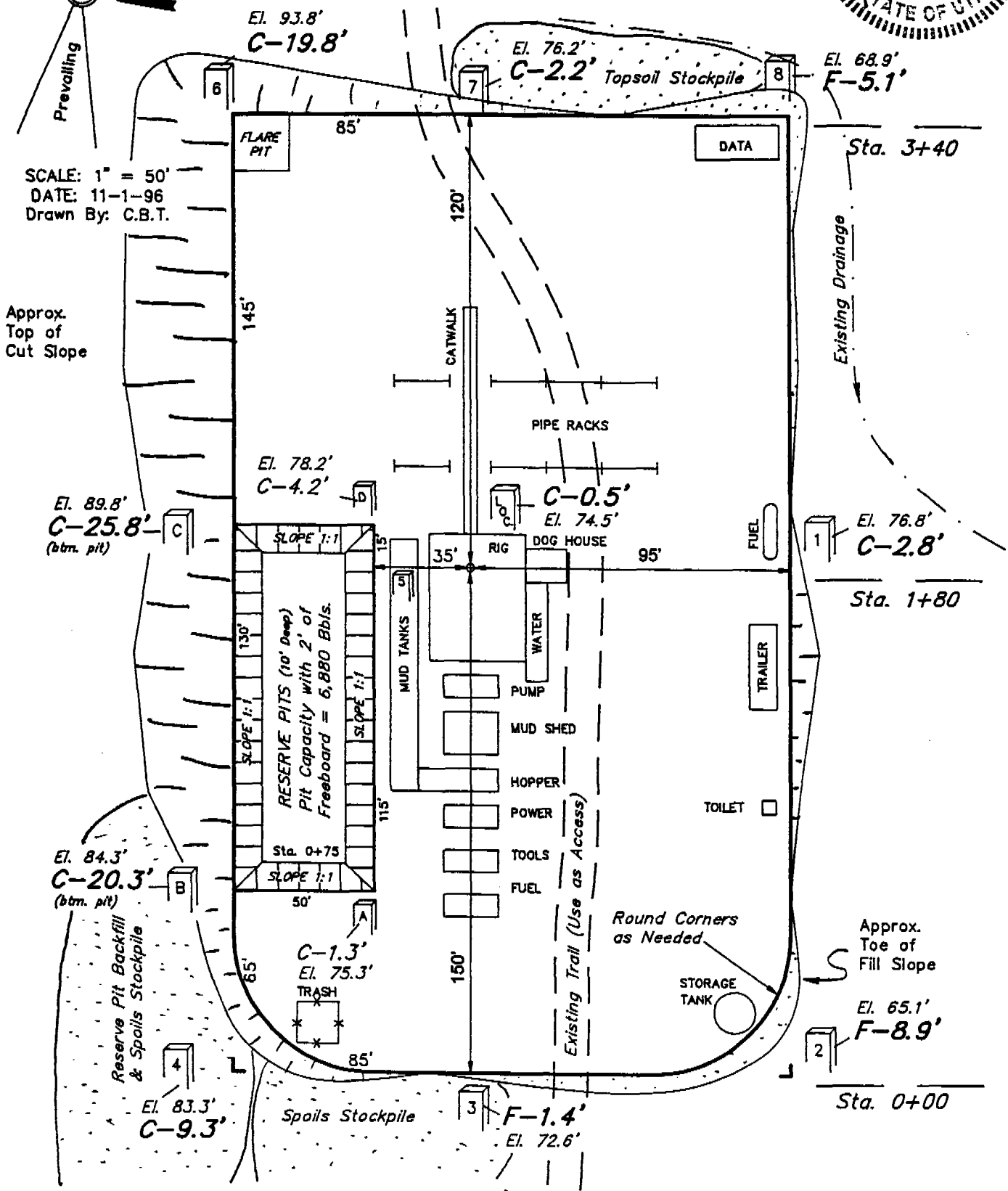
LOCATION LAYOUT FOR

CHUBBUCK #A-1
SECTION 31, T13S, R10E, S.L.B.&M.
2017' FSL 676' FEL





SCALE: 1" = 50'
DATE: 11-1-96
Drawn By: C.B.T.



ELEV. UNGRADED GROUND AT LOC. STAKE = 5874.5'
ELEV. GRADED GROUND AT LOC. STAKE = 5874.0'

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East Vernal, Utah

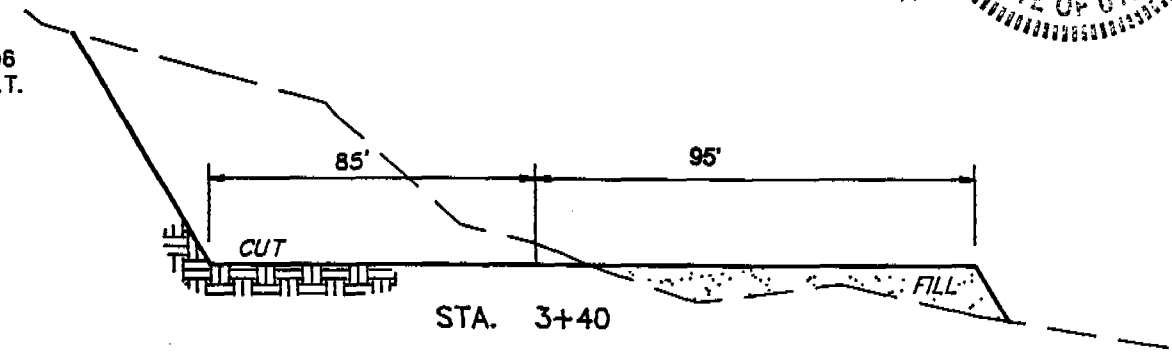
ANADARKO PETROLEUM CORP.

TYPICAL CROSS SECTIONS FOR

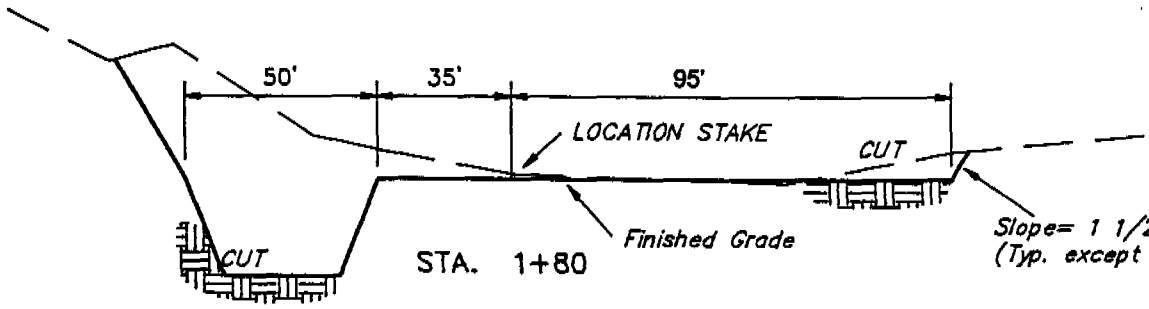
CHUBBUCK #A-1
SECTION 31, T13S, R10E, S.L.B.&M.
2017' FSL 676' FEL

1" = 20'
X-Section Scale
1" = 50'

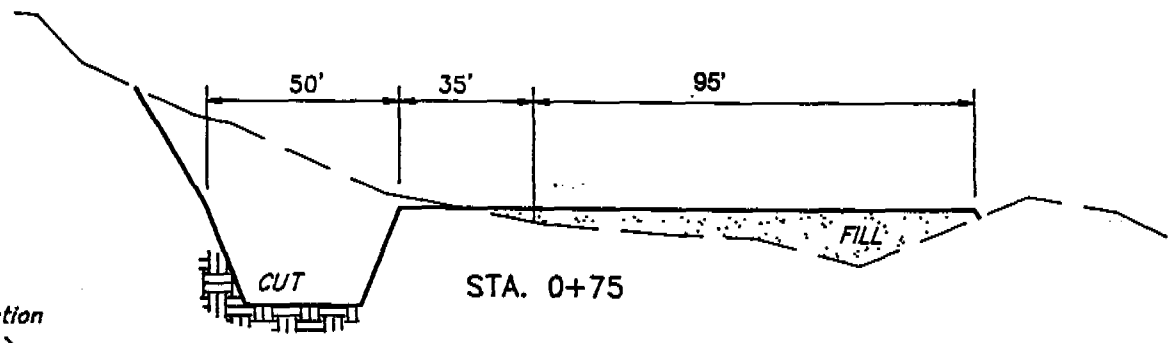
DATE: 11-1-96
Drawn By: C.B.T.



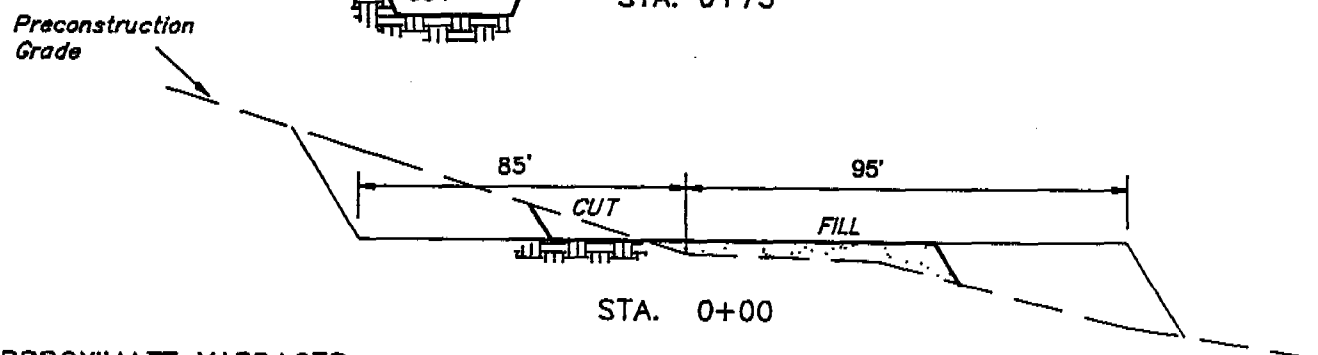
STA. 3+40



STA. 1+80



STA. 0+75



STA. 0+00

APPROXIMATE YARDAGES

CUT

(6") Topsoil Stripping	=	1,300 Cu. Yds.
Remaining Location	=	11,380 Cu. Yds.
TOTAL CUT	=	12,680 CU.YDS.
FILL	=	2,810 CU.YDS.

EXCESS MATERIAL AFTER 5% COMPACTION	=	9,720 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	=	2,190 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	=	7,530 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East Vernal, Utah

FORM 9

STATE OF UTAH

DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial Number: Chubbuck 95

6. If Indian, Allottee or Tribe Name:

7. Unit Agreement Name:

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells. Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

8. Well Name and Number: Chubbuck A-1

1. Type of Well: OIL ☐ GAS ☐ OTHER: Coalbed Methane

9. API Well Number:

2. Name of Operator: Anadarko Petroleum Corporation

10. Field and Pool, or Wildcat: Helper CBM

3. Address and Telephone Number: 17001 Northchase Drive, Houston, TX 77060 281-874-8814

4. Location of Well

Footages: 2017' FSL & 676' FEL, SE Section 31-T13S-R10E

County: Carbon

QQ, Sec., T., R., M.:

State: Utah

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT (Submit in Duplicate)		SUBSEQUENT REPORT (Submit Original Form Only)	
☐ Abandonment	☐ New Construction	☐ Abandonment *	☐ New Construction
☐ Casing Repair	☐ Pull or Alter Casing	☐ Casing Repair	☐ Pull or Alter Casing
☐ Change of Plans	☐ Recompletion	☐ Change of Plans	☐ Shoot or Acidize
☐ Conversion to Injection	☐ Shoot or Acidize	☐ Conversion to Injection	☐ Vent or Flare
☐ Fracture Treat	☐ Vent or Flare	☐ Fracture Treat	☐ Water Shut-Off
☐ Multiple Completion	☐ Water Shut-Off	☐ Other	
☒ Other Location Exception			
Approximate date work will start May, 1997		Date of work completion	

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.

* Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

The subject well is proposed as stated above due to more favorable "Topographic & Geologic" considerations as shown by our offset wells. We feel this will increase the chances of drilling and completing a successful well in conjunction of reducing any surface damages.

As per Rule No. R649-3-3-1.1 - 1.3, the surrounding acreage is obtained wholly by APC, thus consent from all surrounding owners does not apply to the subject well.

13. Name & Signature: Dave Hudspeth Title: Staff Drilling Engineer Date: 09.May.97

(This space for State use only)

(11/83) (See Instructions on Reverse Side)

STATE OF UTAH
COUNTY OF CARBON

SURFACE LAND USE AGREEMENT

KNOW ALL MEN BY THESE PRESENTS, THAT:

WHEREAS, the Wanda Chubbuck, fka Wanda Melo, a widow, whose address is 1165 West Haycock , Helper, UT 84526, (hereinafter referred to as GRANTOR, whether one or more), are the owners of the surface of the following described property, to-wit:

TOWNSHIP 13 SOUTH, RANGE 10 EAST, SLM

Section 31: SW1/4SE1/4, also all that part of the NE1/4SE1/4 beginning at a point 8 feet south of the Northeast corner of the NE1/4SE1/4, thence West 409 feet, thence South 50 feet, thence West 324 feet, thence North 52 feet, thence West 423.6 feet, thence South 392 feet, thence West 136 feet, thence South 920 feet, thence East 1301.6 feet, thence North 1312 feet to the point of beginning. Less and Except those lands conveyed at Book 248, Page 260.

See Exhibits "A", "B" and "C" Attached

and Anadarko Petroleum Corporation whose address is P.O. Box 1330, Houston, TX 77251-1330, (hereinafter referred to as GRANTEE), owns leases covering oil, gas and mineral rights in, under and upon said property; and

WHEREAS, Grantee desire to build access roads, pipelines and appurtenances thereto, power lines, and well sites for the drilling of Coalbed Degasification wells on a portion of said property.

NOW THEREFORE, for and in consideration of the sum of ten dollars ($10.00) and other valuable considerations, the receipt and sufficiency of which is hereby acknowledged, Grantor does hereby grant, sell and convey unto Grantee, its successors and assigns, the easement and right to us that portion of the herein above described property as may be necessary to conduct its drilling and production operations on said property, including the right to construct and maintain coalbed methane gas well sites; to construct, entrench, maintain, operate, replace, remove, protect, or abandon a pipeline or pipelines for water or gas with appurtenances thereto, including, but not limited to, valves, metering equipment, and cathodic equipment; to construct, maintain or cover up any pits or ponds necessary for drilling operations or water storage; to erect, maintain, relocate, replace or remove production facilities, including, but not limited to, pumps, compressors, separators, treaters, etc.; to construct, maintain, relocate, or abandon roads, and in connection therewith, a power line or power lines (said well sites, pipelines, appurtenances, valves, metering equipment, cathodic equipment, road and power lines being sometimes collectively called the "facilities") over, under and through the hereinafter described land as described in the attached Exhibits "A" and "B".

Grantor acknowledges the receipt and sufficiency of the above described consideration as payment for all damages to Grantor's trees, timber, growing crops, and other vegetation being cultivated on said land by the undersigned or their respective lessees, tenants or assigns caused by the construction, maintenance, protection, repair, placement or removal of the facilities as described in the attached exhibits and agrees that the payment and acceptance of the consideration set forth above is in full and complete payment, settlement, compromise and satisfaction of any and all of the above-mentioned losses, liabilities, claims, damages, demands and causes of action for any and all injuries and damage to the surface of the

land hereinbelow described and to any appurtenances or improvements thereon, and for any and all claims including but not limited to loss of potential rental income, damages to and/or loss of livestock and wildlife, arising directly or indirectly in connection with the operations thereon by Grantee, its employees, agents, contractors, or subcontractors in connection with the above-mentioned operations of Grantee.

Grantee shall have the free right of ingress and egress to, over, upon, through and across said right-of-way and easement for any and all purposes that may be necessary or incidental to the maintenance of the right-of-way and easement, with the right to use existing roads which enter Grantor's property for the purpose of constructing, inspecting, repairing and maintaining the facilities and the removal or replacement of same at will, either in whole or in part, and the replacement of said pipeline or pipelines with either like or different size pipe. During temporary periods, Grantee may use such portions of the property along and adjacent to said right-of-way as may be necessary in connection with construction, maintenance, repair, removal or replacement of the facilities and if such use cause any damages to Grantor's lands outside of the above described right-of-way, Grantee shall pay Grantor for such damages.

Grantor reserves the right to the use and enjoyment of said property except for the purposes herein granted, but such use shall not hinder, conflict or interfere with Grantee's surface or subsurface rights hereunder or disturb its facilities. No road, reservoir, excavation, obstruction or structure shall be constructed, created or maintained on, over, along or within the lands covered by this right-of-way without Grantee's prior written consent.

If Grantee desires to remove any trees adjacent to said right-of-way at a later date which may be hazardous to the maintenance and use of the facilities on the right-of-way, Grantee shall first obtain approval from Grantor in writing, Grantor's approval not to be unreasonably withheld, and after receipt of such approval, may proceed to cut and remove such trees subject to payment of additional timber damages, if any are determined.

The undersigned hereby covenant and warrant that they are the surface owners of the above described land, and have the right to enter into this agreement.

FOR THE SAME CONSIDERATION RECITED ABOVE, Grantor and Grantee do hereby release, discharge and acquit the other from any and all liability, and shall indemnify the other against any and all claims and demands for damages, attorneys fees, injury or loss, existing now or done hereafter, to the surface of said lands or to any third parties arising out of or being the result of their or, their agents, contractors, licensees, permittees, successors and assigns own activities on or use of the subject property. However, such parties' potential liability under this paragraph to the other shall be limited to the acts and/or omission of it, or its predecessors, agents, contractors, licensees, permittees, successors, and assigns, and shall not include any acts and/or omissions of the other party, its agents, contractors, licensees, permittees, successors or assigns. Grantee shall reasonably maintain the subject property in order to prevent unnecessary deterioration of the surface and to keep the property in an unlittered condition.

TO HAVE AND TO HOLD the above described rights and easements, together with all rights necessary to operate and maintain the facilities over the right-of-way hereby granted unto the said Grantee, its successors and assigns, until such time as the right-of-way and easement is abandoned under the terms stipulated herein. The Grantee may assign the rights and easements herein granted, either in whole or in part, subject to the terms of this grant, and such rights and easements shall be covenants running with the land and be binding up Grantor, Grantor's heirs, legal representatives and successors in title. Upon abandonment, at the request of the Grantor, Grantee shall execute and deliver to Grantor a document in recordable form evidencing said abandonment.

The making, execution and delivery of this document by Grantor has been induced by no representations, statements, warranties, or other agreements other than those herein expressed. This agreement embodies the entire understanding of the parties, and this instrument may be amended or modified only by subsequent written agreement of the parties.

This agreement is subject to Special Stipulations as described on the attached Exhibit "C". In the event of conflict between the terms of the main body of the Agreement and the Special Stipulations described on the attached Exhibit "C", the Special Stipulations control.

This agreement shall inure to the benefit of the parties hereto, their heirs, successors, and assigns and shall be a burden running with the land.

IN WITNESS WHEREOF, this Surface Land Use Agreement may be executed in any number of counterparts, and each such counterpart hereof shall be deemed to be and original instrument, but all such counterparts together shall constitute for all purposes one instrument executed as of the dates of the respective acknowledgments of the parties hereto, but being effective as of the 1st day of February, 1997.

GRANTOR:

Wanda Chubbuck

Wanda Chubbuck, fka Wanda Melo, a widow
SSN: 529-34-0892
Date: Feb 26, 97

_____

Date: _____

_____

Date: _____

_____

Date: _____

ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF CARBON

I hereby certify, that on this day, before me, a Notary Public duly authorized in the state and county aforesaid to take acknowledgments, personally appeared Wanda Chubbuck, fka Wanda Melo, a widow, to me known to be the person described herein and who executed the foregoing instrument and acknowledged before me that, being informed of the contents of the same, voluntarily signed and delivered the within and foregoing instrument on the day and year herein mentioned.

Given under my hand and seal this 26th day of February, 1997.

Clint W. Turner
Notary Public
Residing at:

CLINT W. TURNER
NOTARY PUBLIC • STATE of UTAH
8438 SOUTH 1275 EAST
SANDY, UT 84094
COMM. EXPIRES 7-14-99

My Commission Expires: 7-14-99

ACKNOWLEDGMENT

STATE OF
COUNTY OF

I hereby certify, that on this day, before me, a Notary Public duly authorized in the state and county aforesaid to take acknowledgments, personally appeared to me known to be the person described herein and who executed the foregoing instrument and acknowledged before me that, being informed of the contents of the same, voluntarily signed and delivered the within and foregoing instrument on the day and year herein mentioned.

Given under my hand and seal this _____ day of _____, 1997.

_____
Notary Public
Residing at:

My Commission Expires: _____

Dated: 13. Feb. 97

GRANTEE:

ANADARKO PETROLEUM CORPORATION

By: Dave Winchester
Dave Winchester
Its: Division Drilling Engineer

ACKNOWLEDGMENT

STATE OF TEXAS
COUNTY OF HARRIS

I, the undersigned authority, a Notary Public in and for said county and state, hereby certify that Dave Winchester, whose name as Division Drilling Engineer, is signed to the foregoing instrument, and who is known to me, acknowledged before me on this day that, being informed of the contents of the instrument, he, with full authority, executed the same voluntarily for and as the act of said corporation.

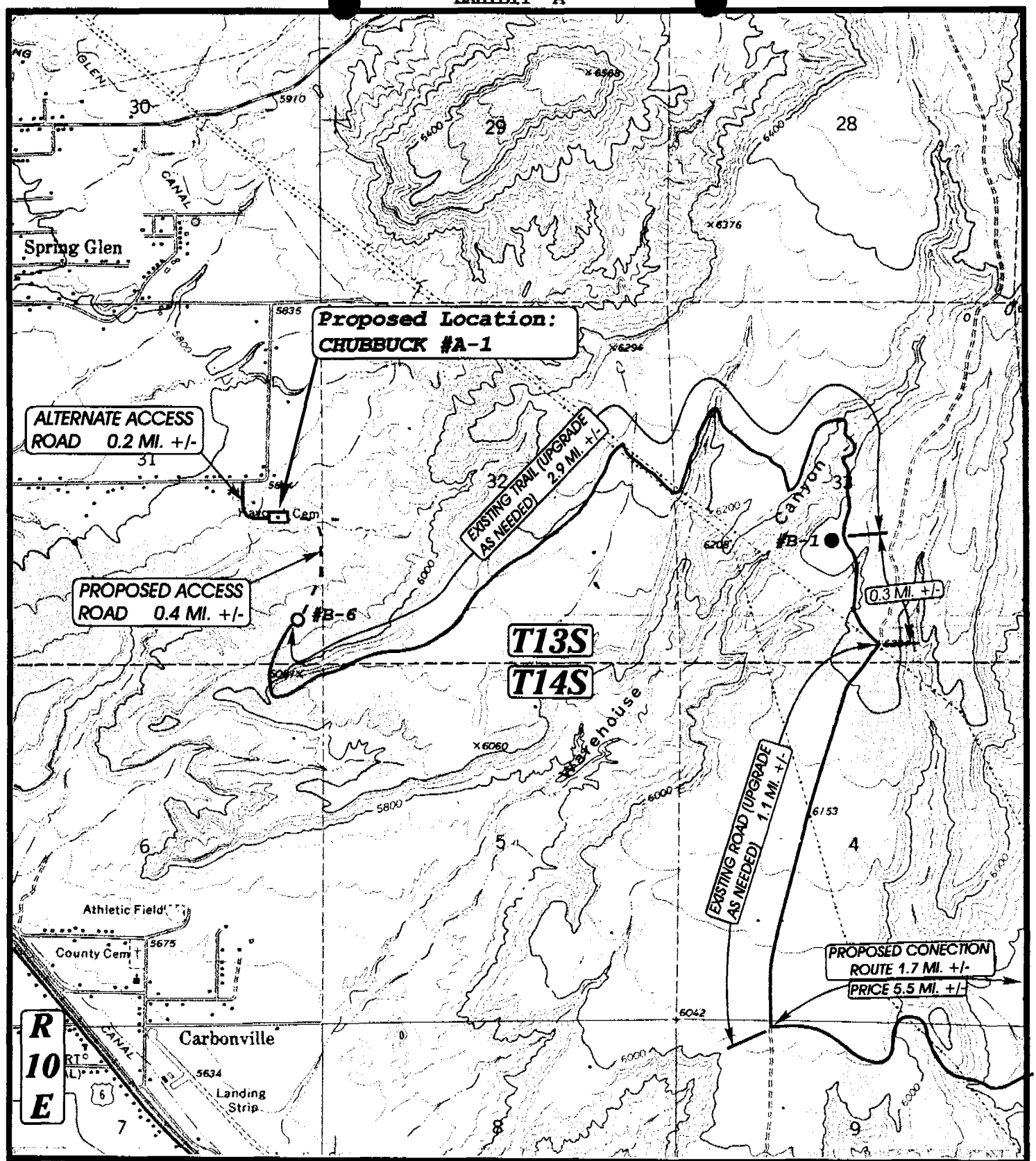
Given under my hand and seal this 13 day of February, 1997.

DAWN D. GARDNER
NOTARY PUBLIC, STATE OF TEXAS
MY COMMISSION EXPIRES
AUG. 10, 1998

dawndgardner
Notary Public
Residing at:

My Commission Expires: 10. Aug. 98

EXHIBIT "A"



UELS

TOPOGRAPHIC
MAP "B"

DATE: 11-4-96
Drawn by: D.COX

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East • Vernal, Utah 84078 • (801) 789-1017

N

SCALE: 1" = 2000'

ANADARKO PETROLEUM CORP.

CHUBBUCK #A-1
SECTION 31, T13S, R10E, S.L.B.&M.
2017' FSL 676' FEL

EXHIBIT "B"

Attached to and made a part of that certain Surface Land Use Agreement effective the 1st day of February, 1997, by and between Wanda Chubbuck, fka Wanda Melo, a widow, as Grantor, and Anadarko Petroleum Corporation, as Grantee.

1. A well location approximately two hundred ten feet (210') by three hundred forty feet (340') (1.64 acres) in the NE1/4SE1/4, Section 31, T13S-R10E, SLM, Carbon County, Utah. (Chubbuck #A-1).

2. A well location approximately two hundred ten feet (210') by three hundred forty feet (340') (1.64 acres) in the SE1/4SE1/4, Section 31, T13S-R10E, SLM, Carbon County, Utah. (#B-6).

4. A road/pipeline/power line right-of-way forty feet (40') wide by approximately four thousand sixty eight feet (4068') long (246.55 rods) (3.74 acres) more or less, in the E1/2SE1/4 of Section 31, T13S-R10E, SLM, Carbon County, Utah.

SIGNED FOR IDENTIFICATION

Wanda Chubbuck

Wanda Chubbuck fka Wanda Melo, a widow

Dave Winchester

EXHIBIT "C"
SPECIAL STIPULATIONS

Attached to and made a part of that certain Surface Land Use Agreement effective the 1st day of February, 1997, by and between Wanda Chubbuck, fka Wanda Melo, a widow, as Grantor, and Anadarko Petroleum Corporation, as Grantee.

1. Each pipeline and power line installed hereunder shall be constructed not less than five (5) feet below the surface elevation of said land at the time of construction, provided that subsoil and subsurface conditions will permit a pipeline or power line to be constructed at this depth using normal construction methods. In the event that rock or other subsoil or subsurface conditions, including other previously laid pipe or other lines, do not permit a pipeline or power line to be constructed at this depth by normal construction methods, each pipeline or power line constructed hereunder shall be constructed at the lowest depth above the five (5) feet minimum depth specified above that normal construction methods will permit. It is agreed and understood that there is no obligation on the part of Grantee to bury power lines. Grantor, its successors or assigns, shall give reasonable notice to Grantee before crossing a pipeline or power line at locations other than existing roadways so that Grantee may instruct Grantor on what measures must be taken by Grantor to protect such facilities from damage.

2. It is hereby understood and agreed that by the execution of this agreement, Grantee does not serve to waive, forfeit, or limit any rights it may have by virtue of the mineral Lease(s) active on the subject properties and shall not be deemed as a limitation on additional surface use if further mineral development is contemplated. If the need for such additional surface use arises, Grantor and Grantee agree to negotiate in good faith to reach an agreement substantially similar in form to this agreement for such use.

3. Lockable gates shall be installed by Grantee wherever roads shall go through any fences located on Grantors lands that are subject to this Agreement.

4. Grantee shall have the right at any time, but not the necessity, to remove or abandon in place all machinery, fixtures, power lines and pipelines placed on or in said land, including the right to draw and remove casing. In no event shall Grantor be due any further damages for Grantee's efforts to restore the surface of the subject lands.

5. All roads shall be constructed with appropriate ditches and drain culverts to allow proper drainage off of said roads and also to prevent water from backing up along said roads, all at the sole expense of Grantee.

SIGNED FOR IDENTIFICATION

Wanda Chubbuck

Wanda Chubbuck, fka Wanda Melo, a widow

Dave Winchester

CULTURAL RESOURCE INVENTORIES OF ANADARKO'S PROPOSED WELL LOCATIONS, ACCESS ROADS AND PIPELINES, WAREHOUSE CANYON AND CARDINAL WASH LOCALITY, CARBON COUNTY, UTAH

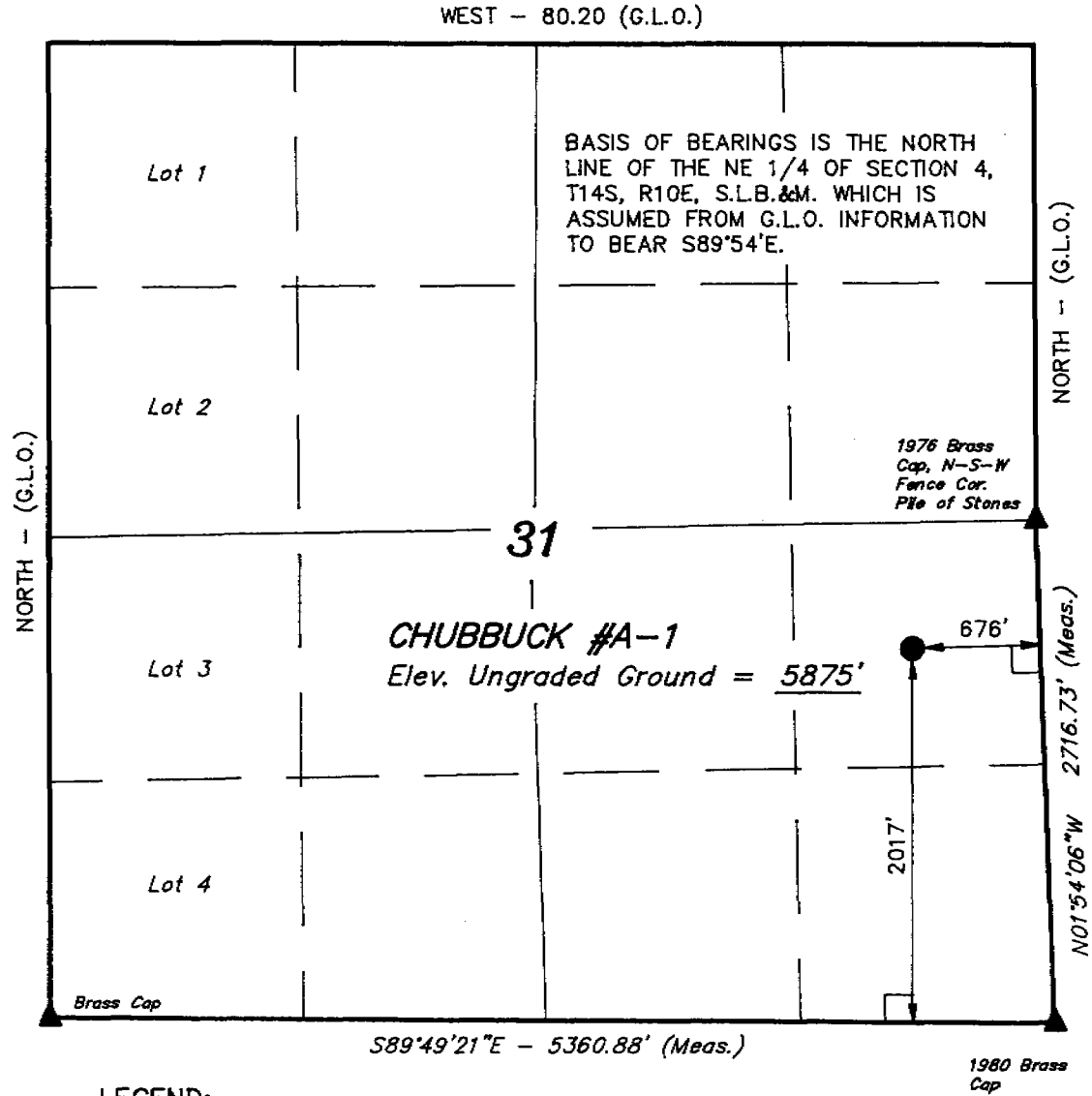
by

Jacki A. Montgomery
and
Keith R. Montgomery

ANADARKO PETROLEUM CORP.

Well location, CHUBBUCK #A-1, located as as shown in the NE 1/4 SE 1/4 of Section 31, T13S, R10E, S.L.B.&M. Carbon County, Utah

T13S, R10E, S.L.B.&M.

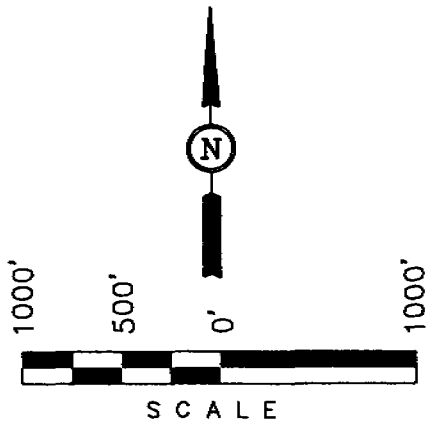


LEGEND:

- └ = 90° SYMBOL
- ● = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

BASIS OF ELEVATION

SPOT ELEVATION NEAR THE SOUTHEAST CORNER OF SECTION 34, T13S, R10E, S.L.B.&M. TAKEN FROM THE HELPER QUADRANGLE, UTAH, CARBON COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 6350 FEET.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Robert L. Kay

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

STATE OF UTAH

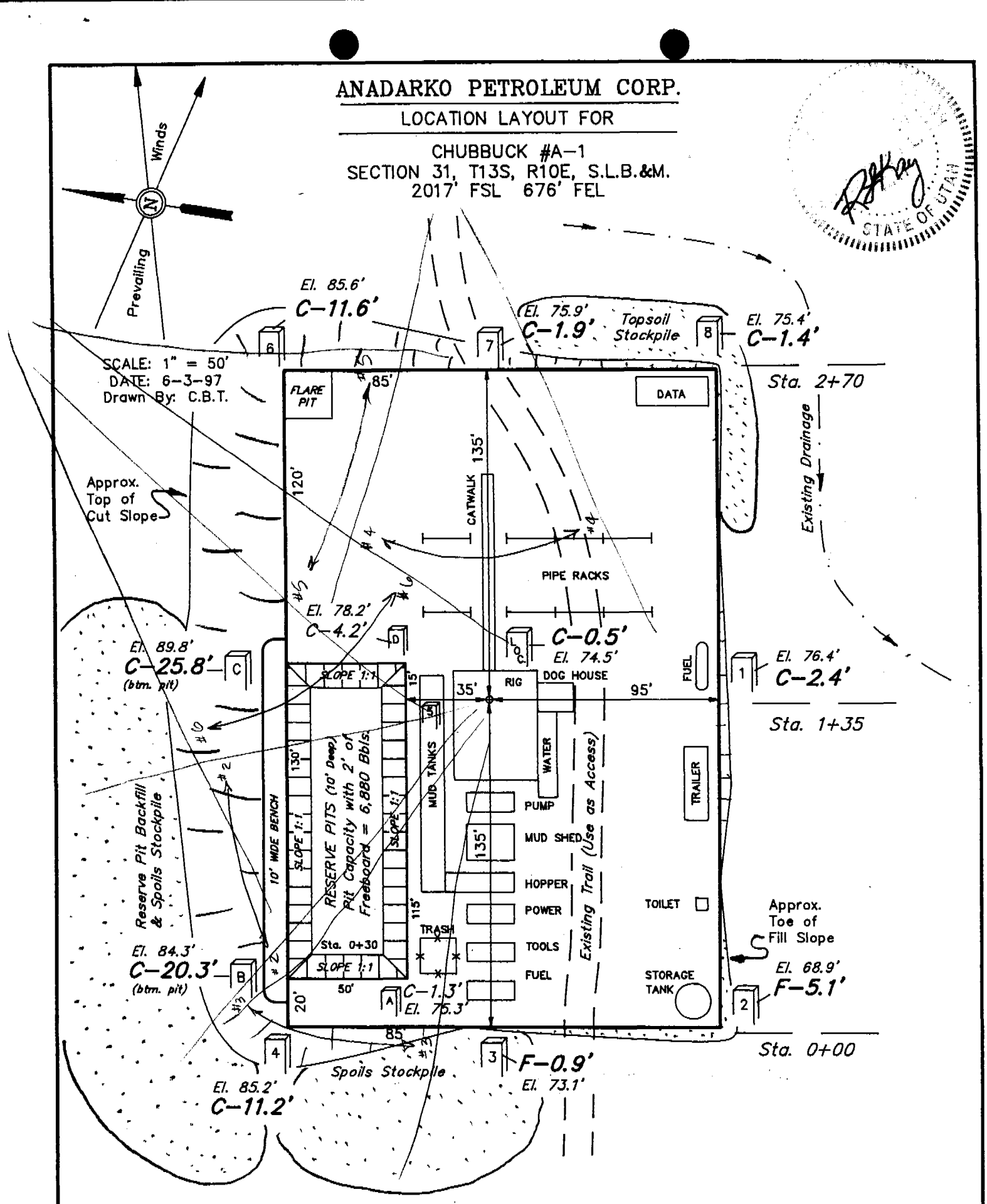
UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST - VERNAL, UTAH 84078
(801) 789-1017

SCALE: 1" = 1000'	DATE SURVEYED: 10-22-96	DATE DRAWN: 11-1-96
PARTY: D.K. K.S. C.B.T.	REFERENCES: G.L.O. PLAT	
WEATHER: COOL	FILE: ANADARKO PETROLEUM CORP.	

ANADARKO PETROLEUM CORP.

LOCATION LAYOUT FOR

CHUBBUCK #A-1
SECTION 31, T13S, R10E, S.L.B.&M.
2017' FSL 676' FEL



ELEV. UNGRADED GROUND AT LOC. STAKE = 5874.5'
ELEV. GRADED GROUND AT LOC. STAKE = 5874.0'

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East Vernal, Utah

ANADARKO PETROLEUM CORP.

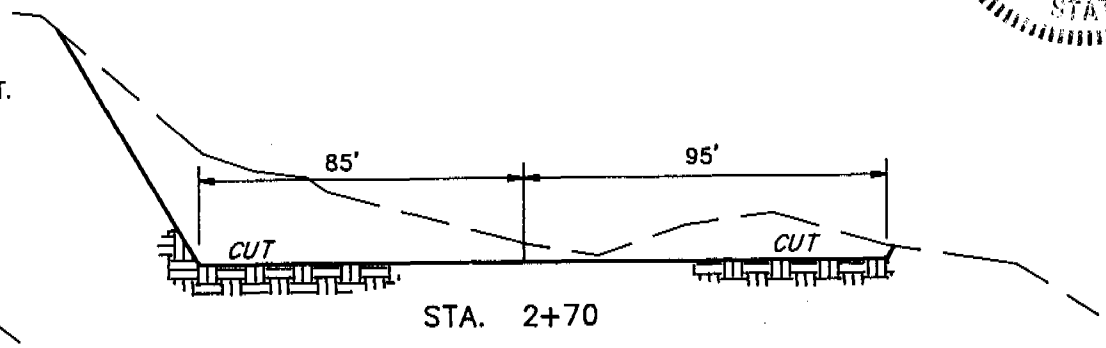
TYPICAL CROSS SECTIONS FOR

CHUBBUCK #A-1
SECTION 31, T13S, R10E, S.L.B.&M.
2017' FSL 676' FEL

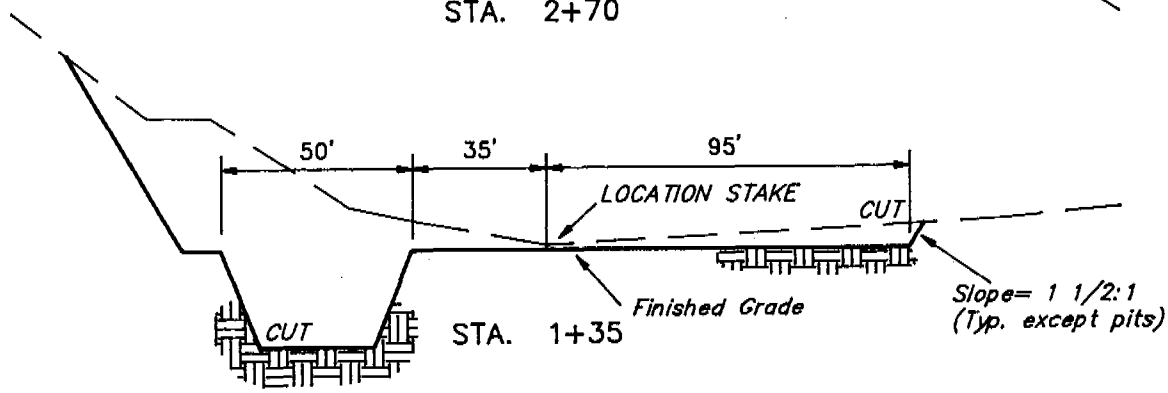
1" = 20' X-Section Scale

1" = 50'

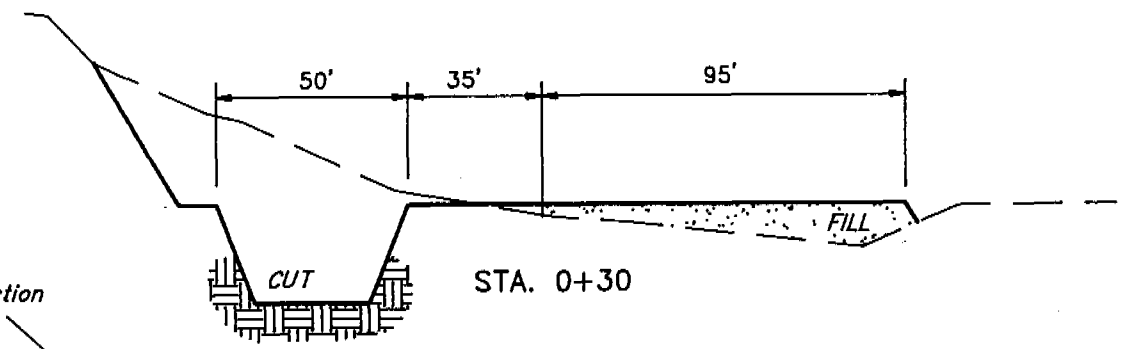
DATE: 6-3-97
Drawn By: C.B.T.



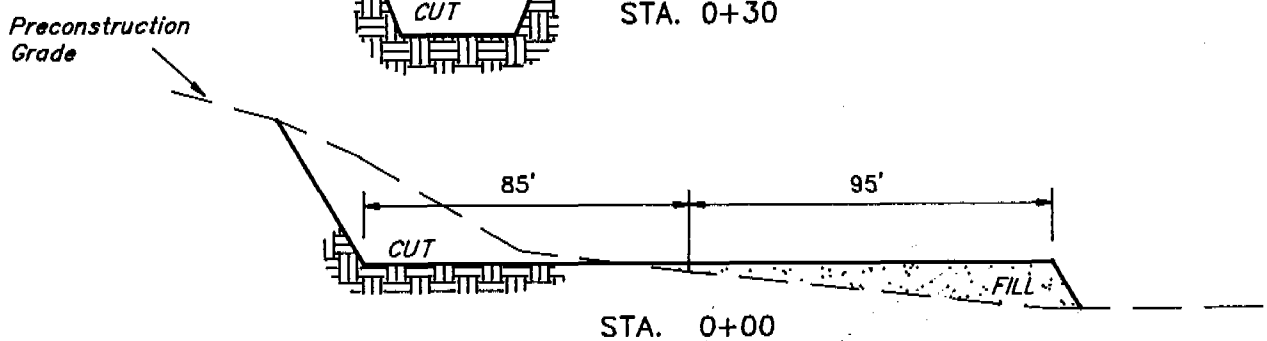
STA. 2+70



STA. 1+35



STA. 0+30



STA. 0+00

APPROXIMATE YARDAGES

CUT

(6") Topsoil Stripping = *900* Cu. Yds.

Remaining Location = *10,500* Cu. Yds.

TOTAL CUT = *11,400* CU.YDS.

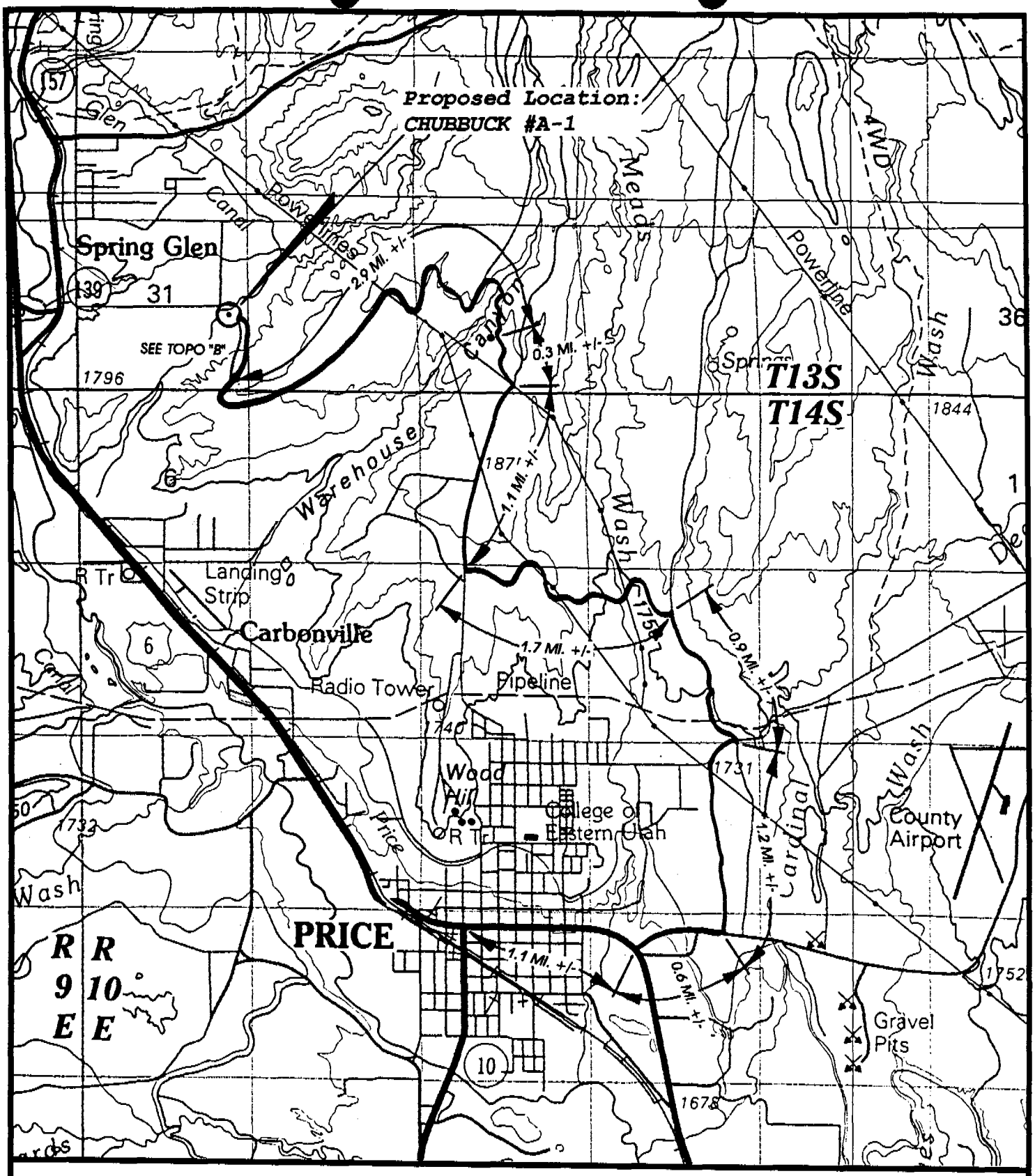
FILL = *1,230* CU.YDS.

EXCESS MATERIAL AFTER 5% COMPACTION = *10,110* Cu. Yds.

Topsoil & Pit Backfill (1/2 Pit Vol.) = *1,790* Cu. Yds.

EXCESS UNBALANCE (After Rehabilitation) = *8,320* Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East *Vernal, Utah*



TOPOGRAPHIC MAP "A"

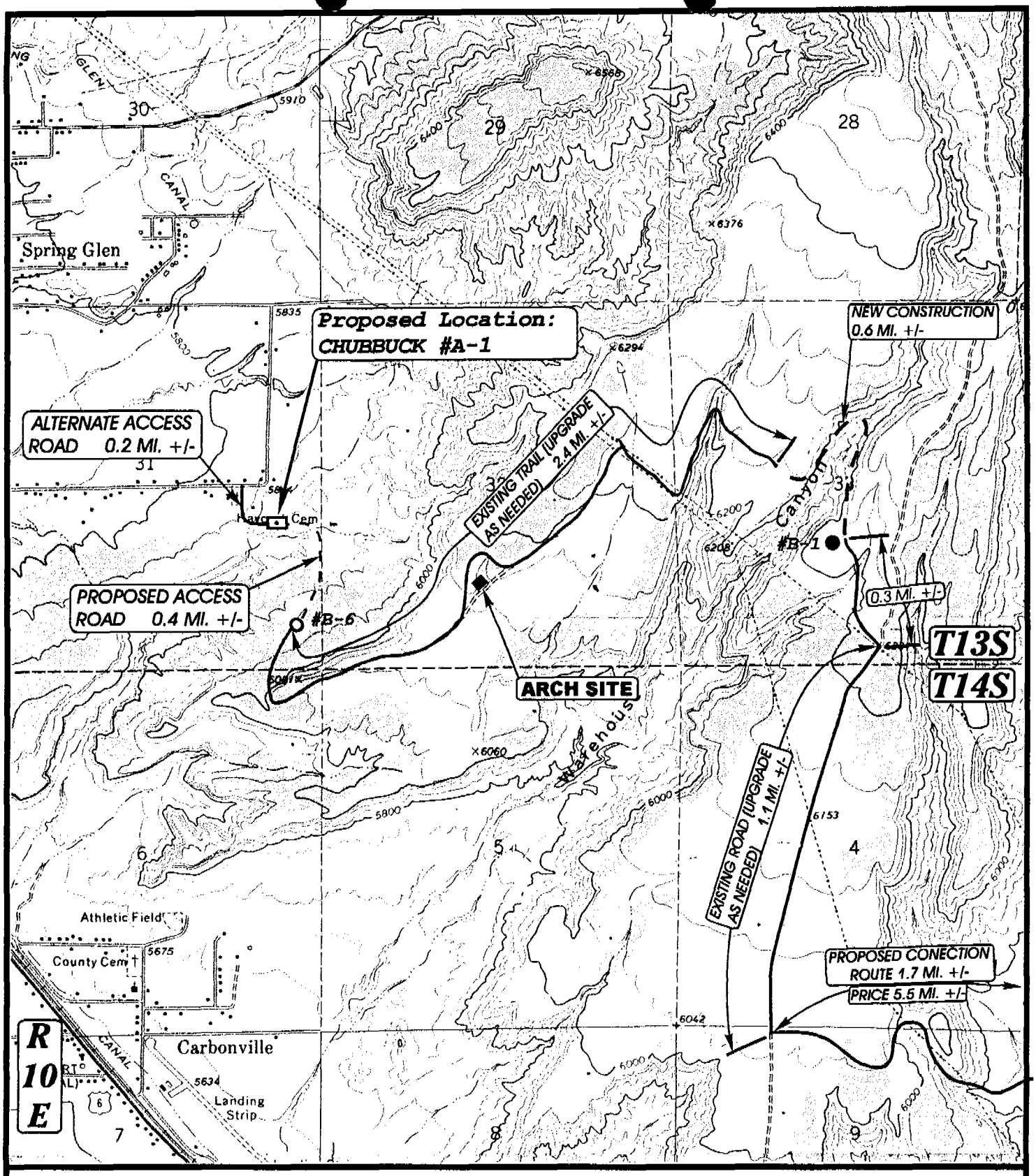
DATE: 11-4-96
Drawn by: D.COX

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East • Vernal, Utah 84078 • (801) 789-1017

SCALE: 1" = 4000'

ANADARKO PETROLEUM CORP.

CHUBBUCK #A-1
SECTION 31, T13S, R10E, S.L.B.&M.
2017' FSL 676' FEL



UELS

TOPOGRAPHIC MAP "B"

DATE: 11-4-96

Drawn by: D.COX

REVISED: 6-13-97 D.COX

UINTAH ENGINEERING & LAND SURVEYING

85 So. 200 East • Vernal, Utah 84078 • (801) 789-1017

SCALE: 1" = 2000'

ANADARKO PETROLEUM CORP.

CHUBBUCK #A-1

SECTION 31, T13S, R10E, S.L.B.&M.

2017' FSL 676' FEL

STATE OF UTAH
COUNTY OF CARBON

CONFIDENTIAL

SURFACE LAND USE AGREEMENT

KNOW ALL MEN BY THESE PRESENTS, THAT:

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TOWNSHIP 13 SOUTH, RANGE 10 EAST, SLM

Section 31: SW1/4SE1/4, also all that part of the NE1/4SE1/4 beginning at a point 8 feet south of the Northeast corner of the NE1/4SE1/4, thence West 409 feet, thence South 50 feet, thence West 324 feet, thence North 52 feet, thence West 423.6 feet, thence South 392 feet, thence West 136 feet, thence South 920 feet, thence East 1301.6 feet, thence North 1312 feet to the point of beginning. Less and Except those lands conveyed at Book 248, Page 260.

See Exhibits "A", "B" and "C" Attached

and Anadarko Petroleum Corporation whose address is P.O. Box 1330, Houston, TX 77251-1330, (hereinafter referred to as GRANTEE), owns leases covering oil, gas and mineral rights in, under and upon said property; and

WHEREAS, Grantee desire to build access roads, pipelines and appurtenances thereto, power lines, and well sites for the drilling of Coalbed Degasification wells on a portion of said property.

NOW THEREFORE, for and in consideration of the sum of ten dollars ($10.00) and other valuable considerations, the receipt and sufficiency of which is hereby acknowledged, Grantor does hereby grant, sell and convey unto Grantee, its successors and assigns, the easement and right to us that portion of the herein above described property as may be necessary to conduct its drilling and production operations on said property, including the right to construct and maintain coalbed methane gas well sites; to construct, entrench, maintain, operate, replace, remove, protect, or abandon a pipeline or pipelines for water or gas with appurtenances thereto, including, but not limited to, valves, metering equipment, and cathodic equipment; to construct, maintain or cover up any pits or ponds necessary for drilling operations or water storage; to erect, maintain, relocate, replace or remove production facilities, including, but not limited to, pumps, compressors, separators, treaters, etc.; to construct, maintain, relocate, or abandon roads, and in connection therewith, a power line or power lines (said well sites, pipelines, appurtenances, valves, metering equipment, cathodic equipment, road and power lines being sometimes collectively called the "facilities") over, under and through the hereinafter described land as described in the attached Exhibits "A" and "B".

Grantor acknowledges the receipt and sufficiency of the above described consideration as payment for all damages to Grantor's trees, timber, growing crops, and other vegetation being cultivated on said land by the undersigned or their respective lessees, tenants or assigns caused by the construction, maintenance, protection, repair, placement or removal of the facilities as described in the attached exhibits and agrees that the payment and acceptance of the consideration set forth above is in full and complete payment, settlement, compromise and satisfaction of any and all of the above-mentioned losses, liabilities, claims, damages, demands and causes of action for any and all injuries and damage to the surface of the

land hereinbelow described and to any appurtenances or improvements thereon, and for any and all claims including but not limited to loss of potential rental income, damages to and/or loss of livestock and wildlife, arising directly or indirectly in connection with the operations thereon by Grantee, its employees, agents, contractors, or subcontractors in connection with the above-mentioned operations of Grantee.

Grantee shall have the free right of ingress and egress to, over, upon, through and across said right-of-way and easement for any and all purposes that may be necessary or incidental to the maintenance of the right-of-way and easement, with the right to use existing roads which enter Grantor's property for the purpose of constructing, inspecting, repairing and maintaining the facilities and the removal or replacement of same at will, either in whole or in part, and the replacement of said pipeline or pipelines with either like or different size pipe. During temporary periods, Grantee may use such portions of the property along and adjacent to said right-of-way as may be necessary in connection with construction, maintenance, repair, removal or replacement of the facilities and if such use cause any damages to Grantor's lands outside of the above described right-of-way, Grantee shall pay Grantor for such damages.

Grantor reserves the right to the use and enjoyment of said property except for the purposes herein granted, but such use shall not hinder, conflict or interfere with Grantee's surface or subsurface rights hereunder or disturb its facilities. No road, reservoir, excavation, obstruction or structure shall be constructed, created or maintained on, over, along or within the lands covered by this right-of-way without Grantee's prior written consent.

If Grantee desires to remove any trees adjacent to said right-of-way at a later date which may be hazardous to the maintenance and use of the facilities on the right-of-way, Grantee shall first obtain approval from Grantor in writing, Grantor's approval not to be unreasonably withheld, and after receipt of such approval, may proceed to cut and remove such trees subject to payment of additional timber damages, if any are determined.

The undersigned hereby covenant and warrant that they are the surface owners of the above described land, and have the right to enter into this agreement.

FOR THE SAME CONSIDERATION RECITED ABOVE, Grantor and Grantee do hereby release, discharge and acquit the other from any and all liability, and shall indemnify the other against any and all claims and demands for damages, attorneys fees, injury or loss, existing now or done hereafter, to the surface of said lands or to any third parties arising out of or being the result of their or, their agents, contractors, licensees, permittees, successors and assigns own activities on or use of the subject property. However, such parties' potential liability under this paragraph to the other shall be limited to the acts and/or omission of it, or its predecessors, agents, contractors, licensees, permittees, successors, and assigns, and shall not include any acts and/or omissions of the other party, its agents, contractors, licensees, permittees, successors or assigns. Grantee shall reasonably maintain the subject property in order to prevent unnecessary deterioration of the surface and to keep the property in an unlittered condition.

TO HAVE AND TO HOLD the above described rights and easements, together with all rights necessary to operate and maintain the facilities over the right-of-way hereby granted unto the said Grantee, its successors and assigns, until such time as the right-of-way and easement is abandoned under the terms stipulated herein. The Grantee may assign the rights and easements herein granted, either in whole or in part, subject to the terms of this grant, and such rights and easements shall be covenants running with the land and be binding up Grantor, Grantor's heirs, legal representatives and successors in title. Upon abandonment, at the request of the Grantor, Grantee shall execute and deliver to Grantor a document in recordable form evidencing said abandonment.

The making, execution and delivery of this document by Grantor has been induced by no representations, statements, warranties, or other agreements other than those herein expressed. This agreement embodies the entire understanding of the parties, and this instrument may be amended or modified only by subsequent written agreement of the parties.

This agreement is subject to Special Stipulations as described on the attached Exhibit "C". In the event of conflict between the terms of the main body of the Agreement and the Special Stipulations described on the attached Exhibit "C", the Special Stipulations control.

This agreement shall inure to the benefit of the parties hereto, their heirs, successors, and assigns and shall be a burden running with the land.

IN WITNESS WHEREOF, this Surface Land Use Agreement may be executed in any number of counterparts, and each such counterpart hereof shall be deemed to be and original instrument, but all such counterparts together shall constitute for all purposes one instrument executed as of the dates of the respective acknowledgments of the parties hereto, but being effective as of the 1st day of February, 1997.

GRANTOR:

Wanda Chubbuck

Wanda Chubbuck, fka Wanda Melo, a widow
SSN: 529-34-0892
Date: Feb 26, 97

_____

Date: _____

_____

Date: _____

_____

Date: _____

ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF CARBON

I hereby certify, that on this day, before me, a Notary Public duly authorized in the state and county aforesaid to take acknowledgments, personally appeared Wanda Chubbuck, fka Wanda Melo, a widow, to me known to be the person described herein and who executed the foregoing instrument and acknowledged before me that, being informed of the contents of the same, voluntarily signed and delivered the within and foregoing instrument on the day and year herein mentioned.

Given under my hand and seal this 26th day of February, 1997.

Clint W. Turner
Notary Public
Residing at:

CLINT W. TURNER
NOTARY PUBLIC - STATE of UTAH
8438 SOUTH 1275 EAST
SANDY, UT 84094
COMM. EXPIRES 7-14-99

My Commission Expires: 7-14-99

ACKNOWLEDGMENT

STATE OF
COUNTY OF

I hereby certify, that on this day, before me, a Notary Public duly authorized in the state and county aforesaid to take acknowledgments, personally appeared to me known to be the person described herein and who executed the foregoing instrument and acknowledged before me that, being informed of the contents of the same, voluntarily signed and delivered the within and foregoing instrument on the day and year herein mentioned.

Given under my hand and seal this _____ day of _____, 1997.

_____
Notary Public
Residing at:

My Commission Expires: _____

Dated: 13. Feb. 97

GRANTEE:

ANADARKO PETROLEUM CORPORATION

By: Dave Winchester
Dave Winchester
Its: Division Drilling Engineer

ACKNOWLEDGMENT

STATE OF TEXAS
COUNTY OF HARRIS

I, the undersigned authority, a Notary Public in and for said county and state, hereby certify that Dave Winchester, whose name as Division Drilling Engineer, is signed to the foregoing instrument, and who is known to me, acknowledged before me on this day that, being informed of the contents of the instrument, he, with full authority, executed the same voluntarily for and as the act of said corporation.

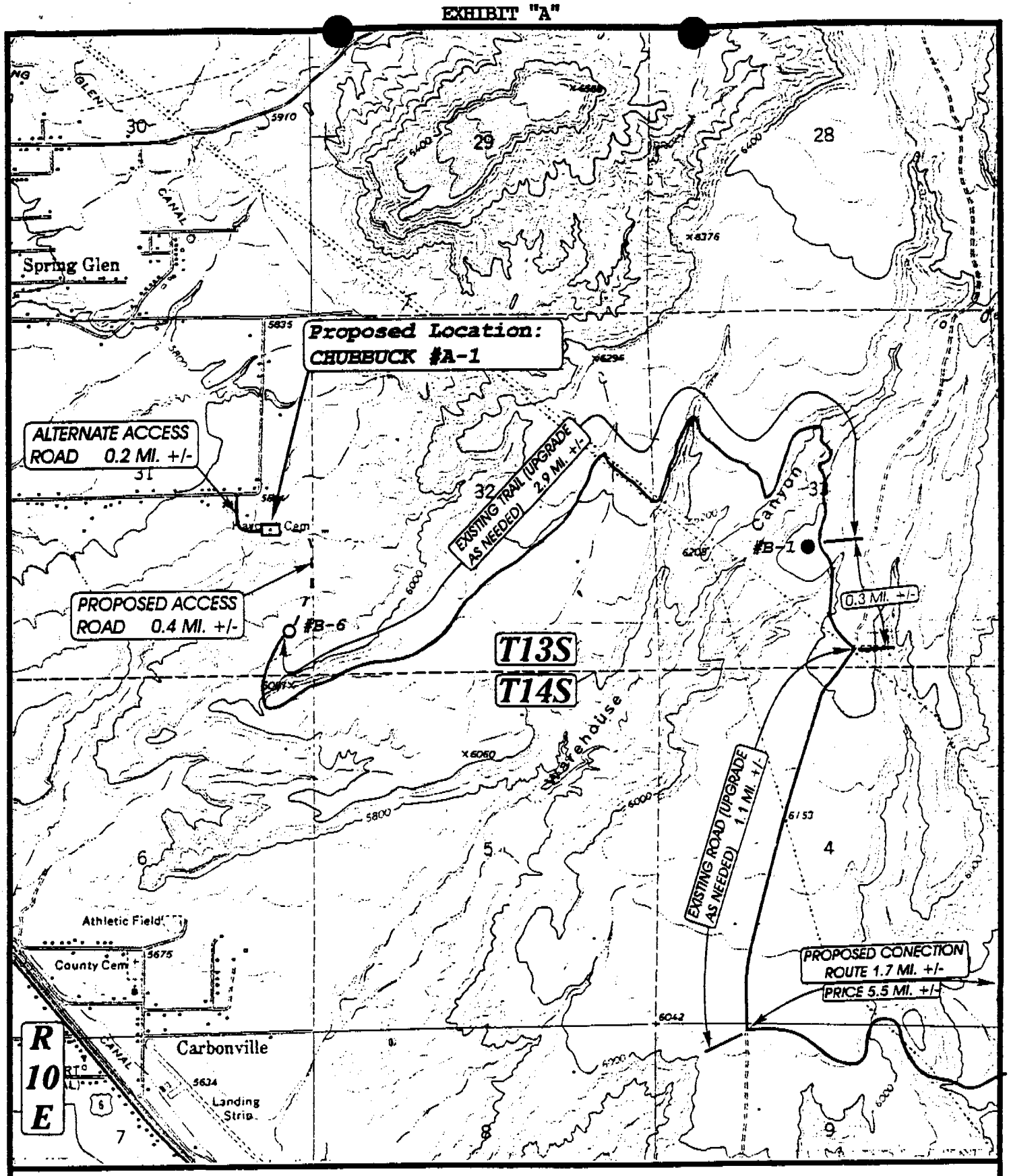
Given under my hand and seal this 13 day of February, 1997.

DAWN D. GARDNER
NOTARY PUBLIC, STATE OF TEXAS
MY COMMISSION EXPIRES
AUG. 10, 1998

dawndgardner
Notary Public
Residing at:

My Commission Expires: 10. Aug. 98

EXHIBIT "A"



TOPOGRAPHIC MAP "B"

DATE: 11-4-96
Drawn by: D.COX

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East • Vernal, Utah 84078 • (801) 789-1017

SCALE: 1" = 2000'

ANADARKO PETROLEUM CORP.

CHUBBUCK #A-1
SECTION 31, T13S, R10E, S.L.B.&M.
2017' FSL 676' FEL

EXHIBIT "B"

Attached to and made a part of that certain Surface Land Use Agreement effective the 1st day of February, 1997, by and between Wanda Chubbuck, fka Wanda Melo, a widow, as Grantor, and Anadarko Petroleum Corporation, as Grantee.

1. A well location approximately two hundred ten feet (210') by three hundred forty feet (340') (1.64 acres) in the NE1/4SE1/4, Section 31, T13S-R10E, SLM, Carbon County, Utah. (Chubbuck #A-1).

2. A well location approximately two hundred ten feet (210') by three hundred forty feet (340') (1.64 acres) in the SE1/4SE1/4, Section 31, T13S-R10E, SLM, Carbon County, Utah. (#B-6).

4. A road/pipeline/power line right-of-way forty feet (40') wide by approximately four thousand sixty eight feet (4068') long (246.55 rods) (3.74 acres) more or less, in the E1/2SE1/4 of Section 31, T13S-R10E, SLM, Carbon County, Utah.

SIGNED FOR IDENTIFICATION

Wanda Chubbuck

Wanda Chubbuck fka Wanda Melo, a widow

Dave Winchester

EXHIBIT "C"
SPECIAL STIPULATIONS

Attached to and made a part of that certain Surface Land Use Agreement effective the 1st day of February, 1997, by and between Wanda Chubbuck, fka Wanda Melo, a widow, as Grantor, and Anadarko Petroleum Corporation, as Grantee.

1. Each pipeline and power line installed hereunder shall be constructed not less than five (5) feet below the surface elevation of said land at the time of construction, provided that subsoil and subsurface conditions will permit a pipeline or power line to be constructed at this depth using normal construction methods. In the event that rock or other subsoil or subsurface conditions, including other previously laid pipe or other lines, do not permit a pipeline or power line to be constructed at this depth by normal construction methods, each pipeline or power line constructed hereunder shall be constructed at the lowest depth above the five (5) feet minimum depth specified above that normal construction methods will permit. It is agreed and understood that there is no obligation on the part of Grantee to bury power lines. Grantor, its successors or assigns, shall give reasonable notice to Grantee before crossing a pipeline or power line at locations other than existing roadways so that Grantee may instruct Grantor on what measures must be taken by Grantor to protect such facilities from damage.

2. It is hereby understood and agreed that by the execution of this agreement, Grantee does not serve to waive, forfeit, or limit any rights it may have by virtue of the mineral Lease(s) active on the subject properties and shall not be deemed as a limitation on additional surface use if further mineral development is contemplated. If the need for such additional surface use arises, Grantor and Grantee agree to negotiate in good faith to reach an agreement substantially similar in form to this agreement for such use.

3. Lockable gates shall be installed by Grantee wherever roads shall go through any fences located on Grantors lands that are subject to this Agreement.

4. Grantee shall have the right at any time, but not the necessity, to remove or abandon in place all machinery, fixtures, power lines and pipelines placed on or in said land, including the right to draw and remove casing. In no event shall Grantor be due any further damages for Grantee's efforts to restore the surface of the subject lands.

5. All roads shall be constructed with appropriate ditches and drain culverts to allow proper drainage off of said roads and also to prevent water from backing up along said roads, all at the sole expense of Grantee.

SIGNED FOR IDENTIFICATION

Wanda Chubbuck

Wanda Chubbuck, fka Wanda Melo, a widow

Dave Winchester

Dave Winchester

CULTURAL RESOURCE INVENTORIES OF ANADARKO'S PROPOSED WELL LOCATIONS, ACCESS ROADS AND PIPELINES, WAREHOUSE CANYON AND CARDINAL WASH LOCALITY, CARBON COUNTY, UTAH

by

Jacki A. Montgomery
and
Keith R. Montgomery

Prepared For:

State of Utah
and
Bureau of Land Management
Price River Resource Area
Moab District

Prepared Under Contract With:

Anadarko Petroleum Corporation
P.O. Box 1330
Houston, Texas 77251

Prepared By:

Montgomery Archaeological Consultants
P.O. Box 147
Moab, Utah 84532

November 1996

United States Department of Interior (FLPMA)
Permit No. 96-UT-60122

State of Utah Antiquities Project (Survey)
Permit No. U-96-MQ-0536b,s,p

ABSTRACT

A cultural resource inventory was performed by Montgomery Archaeological Consultants in the fall of 1996 for Anadarko Petroleum Corporation's well locations, access roads, and pipelines. The project area is situated in the Warehouse Canyon and Cardinal Wash localities, north of Price, Carbon County, Utah. The project consisted of 29 proposed well locations, three pipelines, a waste disposal area and numerous access roads. A total of 534.8 acres was inventoried for cultural and paleontological resources of which 90.9 acres occurred on BLM land (Price River Resource Area), 284.8 acres was situated on State of Utah land, and 159.1 acres was on private land.

The cultural resource inventory resulted in the documentation of four historic sites (42Cb533.2, 42Cb1061, 42Cb1062 and 42Cb1063) and 13 isolated finds of artifacts. Site 42Cb1061 is located adjacent to Vea A-3 well location and 42Cb533.2, 42Cb1062 and 42Cb1063 occur along the alternate access route for Chubbuck A-1 well location. Site 42Cb533.2 is a segment of the Spring Glen Canal built between 1887 and 1893. The canal was evaluated as eligible to the NRHP under Criterion A (Montgomery 1986), and this segment (42Cb533.2) is considered significant. Site 42Cb1061 is an upland ranch occupied between 1900 and 1924. It includes five dry-laid masonry dugouts, several livestock drift fences, and a trash scatter. Site 42Cb1063 is an early 20th century farm homesteaded by Thomas W. Haycock and consists of a two room dugout constructed from local sandstone blocks. Both 42Cb1061 and 42Cb1063 are evaluated as eligible to the NRHP under Criteria C and D. The Haycock Cemetery (42Cb1062) is evaluated as not eligible for nomination to the NRHP. The 13 isolated finds of artifacts are not considered eligible to the NRHP, since they lack additional research value.

42Cb1061 occurs along the southwest side of the proposed Vea A-3 well location. If construction activities are confined within the boundaries of this well pad as stipulated by the engineering plans, then the site will be avoided by the proposed undertaking. Three historic sites (42Cb533.2, 42Cb1062 and 42Cb1063) were documented along Chubbuck A-1 alternate access road from Haycock Lane. It is recommended that the proposed access route from the east is used, and that construction of the Chubbuck A-1 well location be confined within the boundaries as indicated by the engineering plans. In the event that the western route from Haycock Lane is selected it is recommended that: 1) the access route adjacent to the Haycock Cemetery (42Cb1062) is monitored for graves; 2) the structural features along the Spring Glen Canal be avoided; 3) the dugout at 42Cb1063 be avoided by construction activities, and the trash area be tested by an archaeologist for intact subsurface cultural deposits or features.

In conclusion, if the site avoidance procedures are implemented, a determination of **no effect** is recommended pursuant to Section 106, CFR 800 for this project.

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INTRODUCTION

Cultural resource inventories were conducted by Montgomery Archaeological Consultants in September, October and November 1996, for Anadarko Petroleum Corporation's proposed well locations, access roads and pipelines. The project area is situated north of the town of Price between Warehouse Canyon and Cardinal Wash, Carbon County, Utah. The archaeological survey was implemented at the request of Mr. Jeff Duncan, Anadarko Petroleum, Helper, Utah. Land status includes State of Utah land, private property, and public land administered by the Bureau of Land Management (BLM), Price Resource Area (Moab District).

The objective of the inventories was to locate, document and evaluate any cultural resources and paleontological localities within the project area. Because the project areas are on state and federal lands, various historic preservation laws and regulations must be addressed, including the National Historic Preservation Act of 1966 (as amended), the Archaeological Resource Preservation Act of 1974, the Archaeological Resources Protection Act of 1979 (as amended), American Indian Religious Freedom Act of 1978, and the Utah State Antiquities Act of 1973 (amended 1990).

The fieldwork was performed by Jacki A. Montgomery and Keith R. Montgomery of Montgomery Archaeological Consultants under the auspices of U.S.D.I. (FLPMA) Permit No. 96-UT-60122 and State of Utah Antiquities Project (Survey) No. U-96-MQ-0536b,s,p.

File searches for previous projects and documented cultural resources were performed by Renee Weder, Archaeological Assistant, at the State Historical Preservation Office, Salt Lake City (September 24, 1996). Also the authors conducted a records search at the BLM Price River Resource Area Office on September 26, 1996, prior to the fieldwork. In addition, a file search was performed by Martha Hayden, Utah Geological Survey, which indicated no documented paleontological sites in the project area, although a high density of invertebrates are known from the Mancos formation in the region. The result of the archaeological file searches indicated that surveys related to energy exploration (Horn 1994; Pope 1993a, 1993b; Talbot 1985), a highway (Montgomery 1986), and a sample inventory (Hauck 1979) have been completed in the project area. Previously recorded cultural resources in the area included a number of Euroamerican trash disposal sites (Horn 1994; Pope 1993b) and prehistoric limited activity sites (Hauck 1979). Also the historic Spring Glen Canal (42Cb533) occurs just west of the project area, and has been nominated to the National Register of Historic Places (NRHP) (Montgomery 1986).

DESCRIPTION OF PROJECT AREA

Environment

The project area is located in the vicinity of the towns of Price, Carbonville and Spring Glen, Carbon County, Utah. The inventory area consists of 29 proposed well locations, a waste disposal pit, three pipelines and associated access roads. The legal description for the project area is T. 13S., R. 10E., S. 31, 32, 33, 34, 35 and T. 14S., R. 10E., S. 2, 3, 4, 5, 6, 8, 9, 10, 11 (Figures 1, 2 and 3). The well locations and access routes according to land status and legal descriptions are presented in Table 1. The proposed pipeline between well locations Vea A-4 and Helper State D-3 occurs in T. 13S, R. 10E, Sec. 32 and T. 14S. R. 10E. Sec. 5 (Figure 3). It measures approximately 2000 ft, of which 1650 ft is on private land, and 350 ft occurs on State of Utah land. The proposed pipeline from Helper State A-2 and Helper State A-6 access road to Helper State A-7 is located T. 14S., R. 10E., S. 2 and 3 (Figure 1). It measures approximately 2800 ft and occurs on State of Utah land. A third pipeline is proposed from the previous pipeline to Helper State A-3 (Figure 1). It is situated in T. 14S., R. 10E., S. 2 on State of Utah land and measures 700 ft. Also an area for the waste disposal pit was inventoried in the northern portion of S. 3, T. 14S., R. 10E (Figure 1), consisting of 31 acres on State of Utah land.

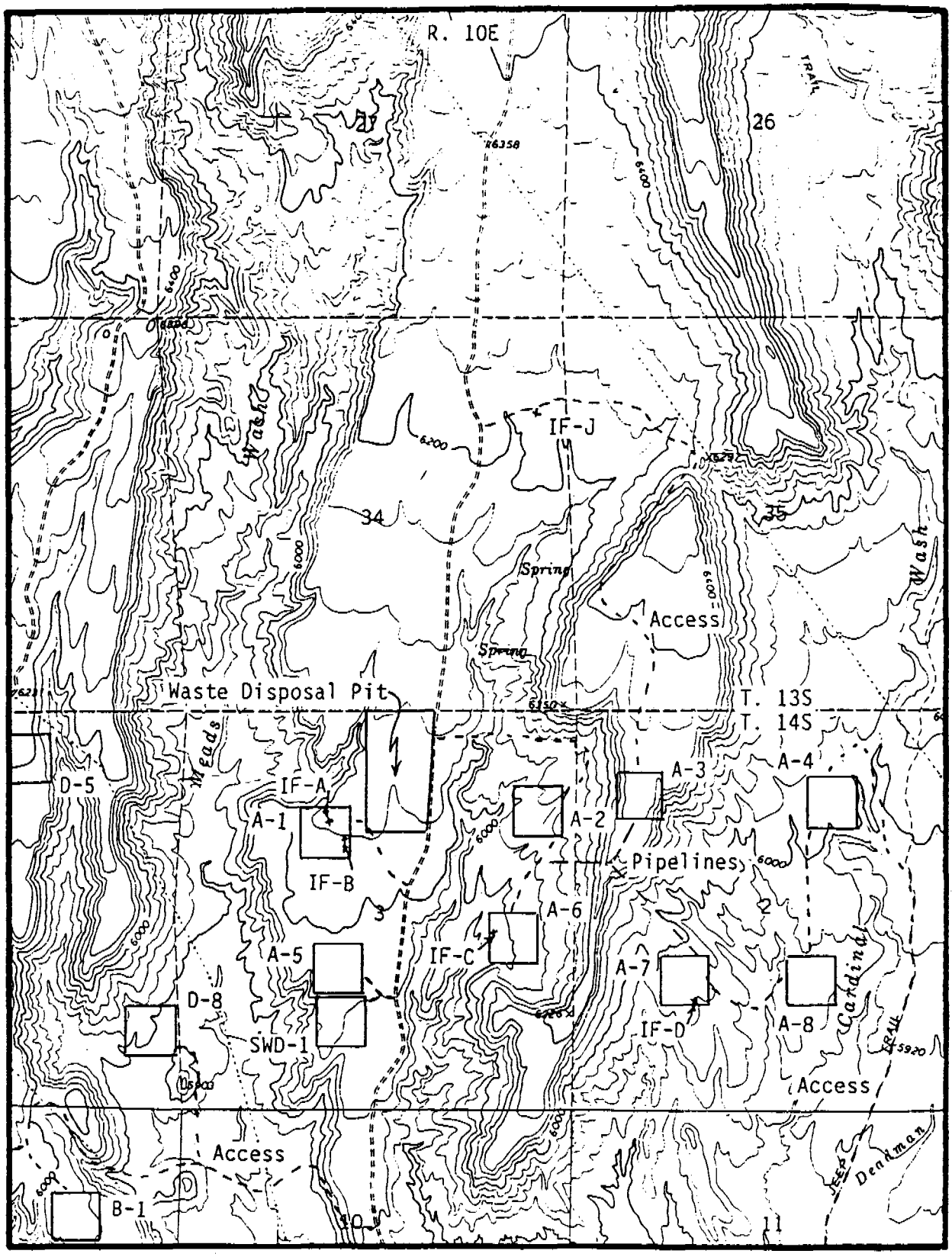

Figure 1. Anadarko Petroleum.Well Locations: Helper State SWD-1, A-1, A-2, A-3, A-4, A-5, A-6, A-7, A-8, B-1, D-5, D-8; Waste Disposal Pit and Pipelines with Cultural Resources. USGS Helper, UT 7.5', 1972. Scale 1:24000.

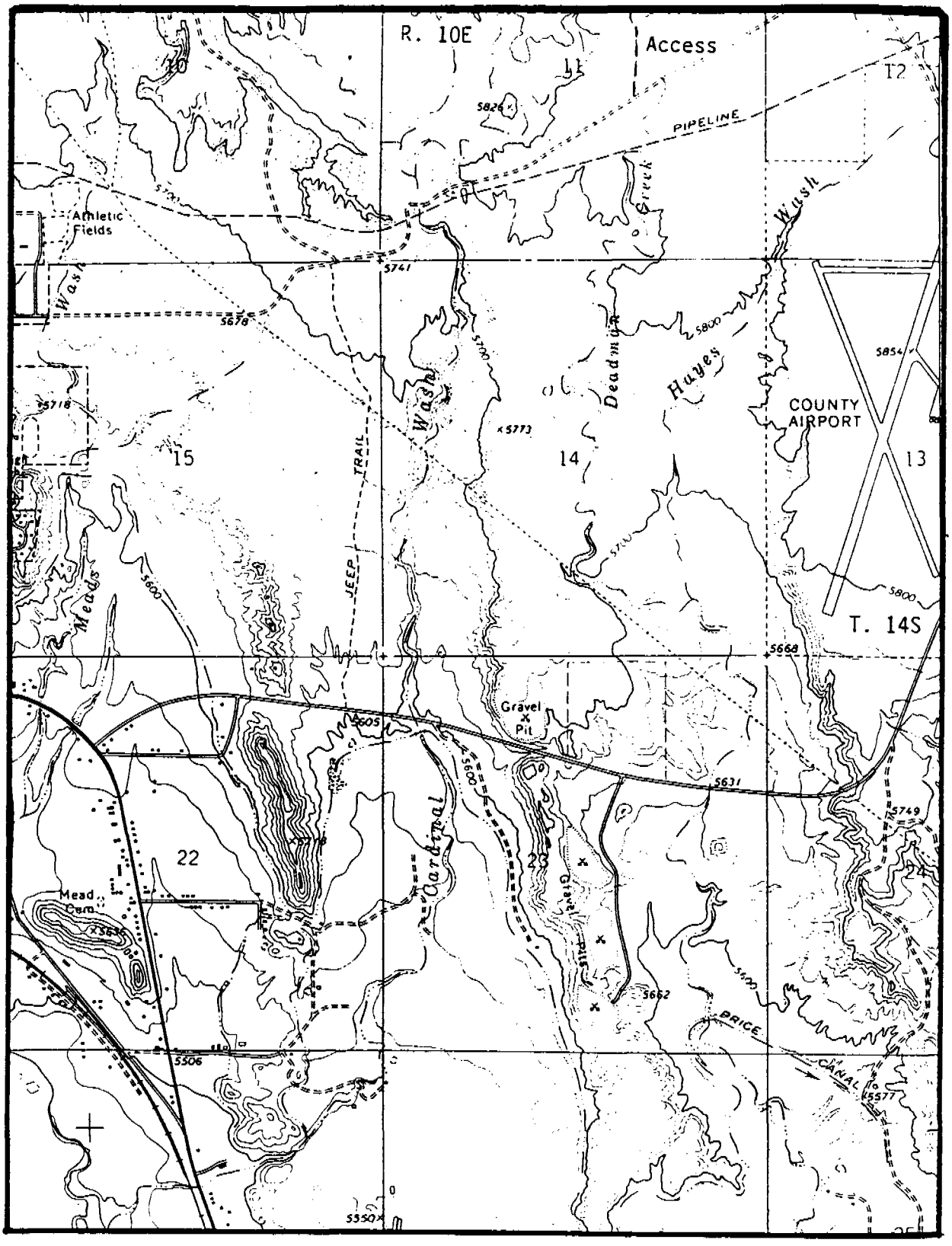

Figure 2. Anadarko Petroleum Well Locations Showing Access Road into Helper State A-4. USGS Price, UT 7.5', 1972. Scale 1:24000.

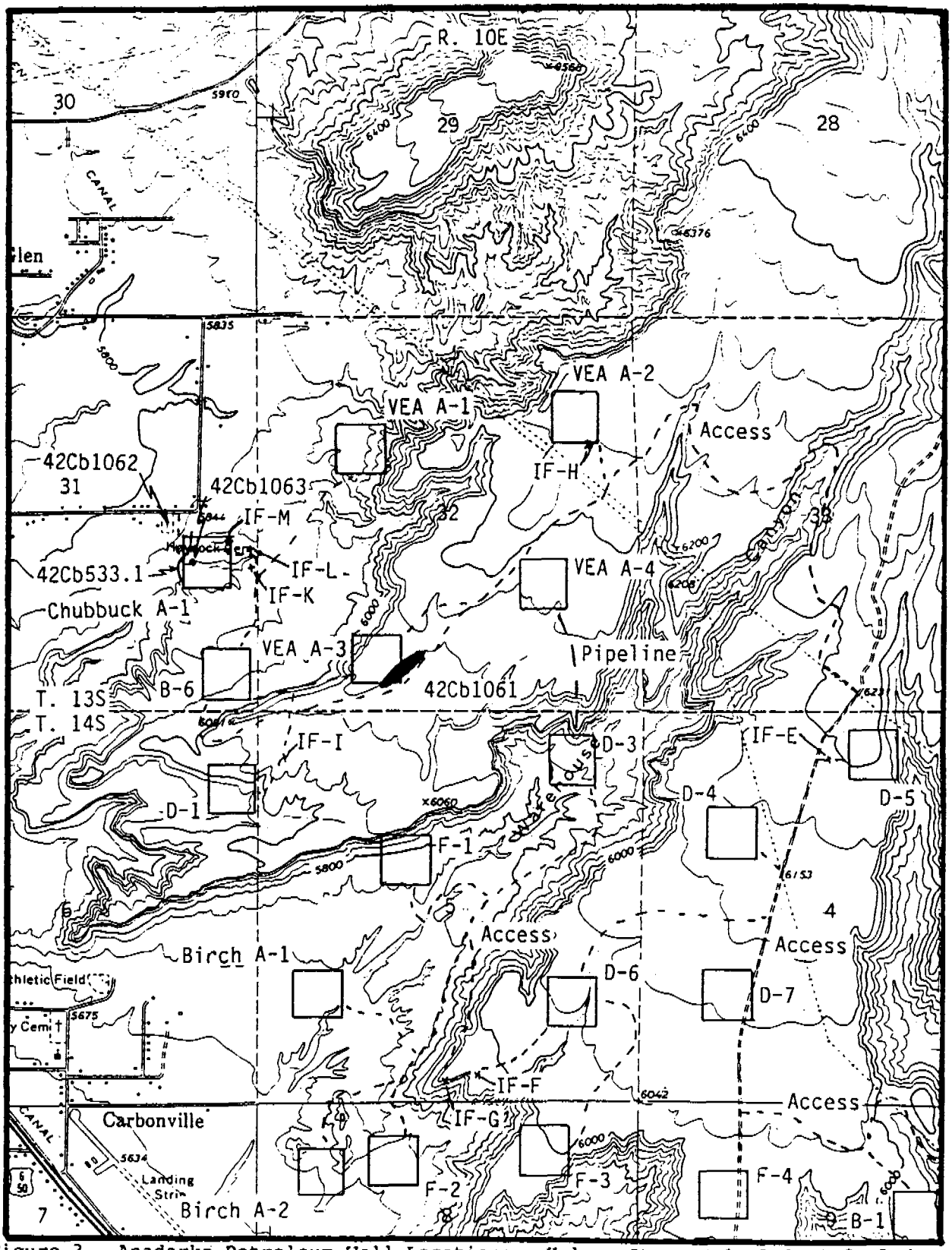

Figure 3. Anadarko Petroleum Well Locations: Helper State B-1, D-1, D-3, D-4, D-5, D-6, D-7; Helper Federal B-6, F-1, F-2, F-3, F-4; Vea A-1, A-2, A-3, A-4; Birch A-1, A-2; Chubbuck A-1 and Pipeline with Cultural Resources. USGS Helper, UT 7.5', 1972. Scale 1:24000.

Table 1. Legal and Land Status Descriptions of Well Locations

Well Number	Legal Location	Location at Surface	Well Land Status	Access/Land Status
Helper State SWD-1	T14S,R10E,S.3	1131' FSL 2194' FWL	State	500'(State)
Helper State #A-1	T14S,R10E,S.3	1621' FNL 2019' FWL	State	1300'(State)
Helper State #A-2	T14S,R10E,S.3	1321' FNL 464' FEL	State	3000'(State)
Helper State #A-3	T14S,R10E,S.2	1200' FNL 900' FWL	State	800'(State) 8000'(BLM)
Helper State #A-4	T14S,R10E,S.2	1100' FNL 1700' FEL	State	9400'(State)
Helper State #A-5	T14S,R10E,S.3	1816' FSL 2201' FWL	State	700'(State)
Helper State #A-6	T14S,R10E,S.3	2288' FSL 820' FEL	State	1300'(State)
Helper State #A-7	T14S,R10E,S.2	1635' FSL 1497' FWL	State	1500'(State)
Helper State #A-8	T14S,R10E,S.2	1700' FSL 2000' FEL	State	1800'(State)
Helper State #B-1	T14S,R10E,S.9	1595' FNL 1406' FEL	State	4400'(State)
Helper State #D-1	T14S,R10E,S.6	1131' FNL 429' FEL	State	650'(Pvt) 1650'(BLM)
Helper State #D-3	T14S,R10E,S.5	691' FNL 1006' FEL	State	2000'(Pvt) 400'(State)
Helper State #D-4	T14S,R10E,S.4	1681' FNL 1232' FWL	State	2700'(State)
Helper State #D-5	T14S,R10E,S.4	644' FNL 2165' FEL	State	2200'(State)
Helper State #D-6	T14S,R10E,S.5	1300' FSL 999' FEL	State	1350'(Pvt) 1750'(State)
Helper State #D-7	T14S,R10E,S.4	1500' FSL 1200' FWL	State	200'(Pvt) 1300'(State)
Helper State #D-8	T14S,R10E,S.4	1059' FSL 395' FEL	State	2000'(State)
Helper Federal #B-6	T13S,R10E, S.31	471' FSL 433' FEL	BLM	1600'(Pvt) Alternate 4900'(Pvt)
Helper Federal #F-1	T14S,R10E,S.5	2117' FNL 1949" FWL	BLM	5900'(Pvt)
Helper Federal #F-2	T14S,R10E,S.8	860' FNL 1881' FWL	BLM	1500'(Pvt)

Well Number	Legal Location	Location at Surface	Well Land Status	Access/Land Status
Helper Federal #F-3	T14S,R10E,S.8	698' FNL 1302' FEL	BLM	2800'(Pvt)
Helper Federal #F-4	T14S,R10E,S.9	1294' FNL 1182'FWL	BLM	2100'(Pvt) 700'(State)
Vea #A-1	T13S,R10E, S.32	1731' FNL 1291' FWL	Private	3100'(Pvt)
Vea #A-2	T13S,R10E, S.32	1307' FNL 842' FEL	Private	1150'(Pvt) 750'(State) 8150'(BLM)
Vea #A-3	T13S,R10E, S.32	700' FSL 1641' FWL	Private	2200'(Pvt)
Vea #A-4	T13S,R10E, S.32	1670' FSL 1335' FEL	Private	1700'(Pvt)
Birch #A-1	T14S,R10E,S.5	1507' FSL 856' FWL	Private	3000'(Pvt)
Birch #A-2	T14S,R10E,S.8	945' FNL 825' FWL	Private	1600'(Pvt)
Chubbuck #A-1	T13S,R10E, S.31	2017' FSL 676' FEL	Private	700'(Pvt) Alternate 700'(Pvt)

In general, the project area lies in the uplands and margins of the Price River Valley. Named topographic features in the area include Warehouse Canyon, Meads Wash and Cardinal Wash. The physiographic subdivisions include the Mancos Shale Lowlands and Bookcliffs-Roan Plateau physiographic subdivisions of the northern Colorado Plateau (Stokes 1986). Geologically, the study area lies entirely in the Cretaceous Mancos Shale formation. From oldest to youngest, the named units of the Mancos Shale are the Tununk shale, the Ferron sandstone, the Blue Gate shale, the Emery sandstone and the Musuk shale. Quaternary gravels cover the lower portion of the project area.

The project area lies within the Upper Sonoran vegetation zone. The upper elevation is dominated by a Pinyon-Juniper community and the lower elevation consists of a Desert Shrub association. Elevations range from 5760 to 6280 feet. The nearest permanent water source is Price River, situated one mile from the western project boundary, and several springs occur in the eastern area between Meads Wash and Cardinal Wash. Modern impacts to the study area include numerous roads, overhead power lines, underground gas lines, mineral exploration and grazing.

Cultural History

Prehistoric occupation of the study area spans the last 10,000-12,000 years. Cultural remains representing the Paleoindian, Archaic, Formative, Late Prehistoric and Historic periods have been identified in the study area.

The earliest known archaeological remains in central Utah are attributable to the Paleoindian period, which have been divided into three complexes: the Llano (ca. 11,500-11,000 B.P.), the Folsom (ca. 11,000-10,000 B.P.) and the Plano (ca. 10,500-7500 B.P.). To date, in Carbon and Emery Counties, Paleoindian artifacts have been found as surface isolated finds or lithic scatters (Copeland and Fike 1988). Finds of extinct fauna are also reported from the region, including a variety of animals from the Silver Creek locality (Madsen et al. 1976), and a mammoth from Huntington Canyon (Gillette 1989).

Archaic sites on the northern Colorado Plateau have been found to cluster in areas which offer overview qualities, proximity to outcrops of tool quality stone, as well as nearness to major topographic features (Black and Metcalf 1986; Howell 1992). A number of important Archaic sites have been excavated in central Utah including Joe's Valley Alcove, Clyde's Cavern, Pint-Size Shelter and Aspen Shelter (Howell 1992:20).

The Formative period is marked by reliance on domesticated plants, most notably corn, settlement in sedentary or semi-sedentary hamlets near areas optimum for horticulture, and the introduction of pottery, the earliest type in the project area being Emery Gray. The study area is within the occupation zone of the San Rafael Fremont, as defined by Marwitt (1970). This variant is characterized by circular, stone-lined or earthen pit dwelling, and the clay-rimmed, flagstone paved firepit. One of the highest San Rafael Fremont site densities is in the Castle Valley, especially along Ferron Creek and Muddy Creek tributaries (Black and Metcalf 1986). Following the Fremont abandonment of the area, a largely nomadic hunting and gathering lifeway resumed. This occupation is attributed to the Numic-speaking peoples, a diverse group that was present throughout much of Utah upon the arrival of Europeans in the 18th century.

Throughout the first half of the nineteenth century, explorers, surveyors and trappers moved in small parties through the region, up and down the Old Spanish Trail. The first permanent settlers in the area were Mormons followed by immigrants and coal miners. Beginning in 1878, Mormon settlers spread out thinly along the Price River to take advantage of the available water. Most of the first settlers on the Price River, the Rhoades, Grameses, Powells, and others, came from Utah Valley by way of Soldier Summit (Geary 1981:131). In most of Carbon County, cattle ranching was the dominant mode of life in the 1870s and 1880s. The Whitmore ranch lay at the mouth of Whitmore Canyon, while the Miller brothers had their headquarters just below Hiawatha, with both outfits ranging widely throughout the area. Another large cattle outfit was at Spring Glen operated by John and Nels Jensen. Up until 1908, practically all of the ranges in the area were public domain or open range. About 1910, a state law was passed allowing the sale of state owned land at $1.50 per acre, called "State Selections" (Liddell 1948:56). Many persons took advantage of these low land prices and purchased acreage surrounding water, thus trying to control the ranges. Finally the stock raising homestead rights were passed, allowing 640 acres to all who could qualify (Ibid:56). The sheep industry thrived in Carbon County from 1909 to 1914. Sheep outfits established in Carbon County from 1901 to 1905 included J.H.L Leautaud, Charles Larsen, Wallace Lowery and Pete Jeanselme (Moynier 1948:58). In the 1920s, goats started to crowd the sheep off the range. In 1925-26, there were over 20,000 goats in Carbon County (Liddell 1948:55). When the Taylor Grazing Act became effective, goats were practically eliminated from public range.

During the early 1880s, the Denver and Rio Grande Railroad extended its lines through Utah going through Price and Spanish Fork Canyon. Because of the railroad, Price became the market for the hay and grain from Emery County farms and the shipping point for livestock, and later the main retail center. The townsite of Price was surveyed in 1883, and a long meeting house was built. The town of Helper was homesteaded and surveyed by Teancum Pratt, son of Parley P. Pratt in the early 1890s (Geary 1992:242). In 1892, the railroad elected to establish a division point at Helper, naming it for the helper engines attached to trains for the pull to Soldier Summit (Ibid:242). Ethnic diversity would become the chief characteristic of Helper, and in 1894, the D&RG established an immigration bureau to advertise the resources of Utah Territory (Notarianni 1981:158). One of the earliest canals built to divert water from the Price River onto farm land in the area was the Spring Glen Canal. It was constructed between 1887 and 1893, prior to the formation of the town of Spring Glen. The ditch began about three-fourths of a mile above Helper. It was made five miles long at first but later made nine miles long so it would extend as far as Carbonville. The canal was supervised by the LDS church leaders, most notably Spring Glen's Bishop Heber J. Stowell. Almost the entire community of Spring Glen participated in ditch construction with its greatest task being the building of 360 ft tunnel

from Helper to the north, where water had already been brought from the Price River (Taniguchi 1981:45). Carbonville, located between Spring Glen and Price, was never platted nor incorporated as a town, and remains a loosely-demarcated farming area.

Coal mining developed simultaneously with railroad expansion. The completion of the railroad connection greatly expanded the marketability of coal in the Price River Canyon region, and coal towns began to be established under the control of several railroad companies (e.g., Pleasant Valley Railroad Company and Union Pacific Railroad Company). Castle Gate was the first mine built in the vicinity around 1883, opened by the Pleasant Valley Coal Company. In 1906 the first of the coal operations released from railroad control began production at Kenilworth, three miles east of Helper. This was followed by the opening of the mines in Spring Canyon in 1910 which became the commerical hub of the coal camps with stores, hotels, restaurants, saloons, ethnic lodges and dance halls.

SURVEY METHODOLOGY

An intensive pedestrian survey was performed for this project which is considered 100% coverage. At each of the 29 well locations, a 10-acre square parcel was defined, laid out on the cardinal directions and centered on the well pads center stake. The interiors of the parcels were examined for cultural and paleontological resources with a series of parallel sweeps, spaced at 10 m (30 foot) intervals. The access roads and pipeline routes were surveyed to a 100 foot (30 m) width by walking parallel transects along the staked centerline, spaced no more than 10 m (30 foot) apart. Inventoried acreage for this project consisted of 321 acres (well locations), 31 acres (waste disposal pit), 8.8 acres (pipeline) and 89.1 acres (access roads). The acreage according to land status is BLM land (Price River Resource Area) 90.9 acres, State of Utah 284.8 acres and private land 159.1 acres. In summary, a total of 534.8 acres was surveyed for cultural and paleontological resources.

Cultural resources were recorded as either an archaeological site or isolated find of artifact. Archaeological sites were defined as spatially definable areas with features and/or ten or more artifacts. Sites were documented by the archaeologists walking transects across the site, spaced no more than 3 m apart, and marking the locations of cultural materials with pinflags. This procedure allowed clear definition of site boundaries and artifact concentrations. At the completion of the surface inspection, a transit was employed to point-provenience diagnostic artifacts and other relevant features in reference to the site datum. Archaeological sites were plotted on a 7.5' USGS quadrangle, photographed, with site data entered on an Intermountain Antiquities Computer System (IMACS, 1990 version) inventory form (Appendix A). Isolated finds are defined as individual artifacts or light scatter of items, which lack sufficient material culture to warrant IMACS forms, or to derive interpretation of human behavior in a cultural and temporal context. All isolated artifacts were plotted on a 7.5' USGS map and described in this report.

INVENTORY RESULTS

The inventory of Anadarko's 29 well locations, three pipelines, and associated access roads resulted in the documentation of three newly-found archaeological sites, a segment of the Spring Glen Canal, and 13 isolated finds of artifacts.

Smithsonian Site No.: 42Cb1061
Temporary Site No.: ANADWCCW J/1
Legal Description: T. 14S, R. 10E, Sec. 10, NE1/4, SE1/4, SW1/4 and SW1/4, SE1/4, SW1/4
Well Location: Vea A-2
Jurisdiction: Private
Description: This is a small ranch situated just northwest of Warehouse Canyon between the towns of Spring Glen and Carbondale. The site occurs along the slope of a low pinyon-juniper ridge overlooking a sagebrush flat which served

as a grazing area for livestock. Architectural features consisted of four dry-laid masonry structures excavated into the southeast facing ridge slope (Figure 4). The construction material is local well-sorted (undressed) sandstone rocks and boulders. Most of the above ground surface stone walls have collapsed, although subterranean walls and foundations are intact. The structures lacked evidence of a superstructure, although trees from the surrounding area were probably employed, evidenced by the numerous axe-cut stumps surrounding the features. Several of the structures may have been burned as shown by interior wall oxidization. Features 2, 3 and 4 appear to have been used as domiciles and only a small amount of trash was found in association. Feature 5, which is smaller, appears to have been used as the kitchen/storage structure, since the dump is located downslope from the room. It appears that wagons were used by the occupants and water was brought in by barrows. The nearest water is the historic Spring Glen Canal. This appears to have been a ranching homestead occupied during the early 1900s. Historic information for the project area indicates that during this time period, both cattle and sheep outfits ranged livestock on government and state owned land. Sheep especially were numerous in the area at this time. According to the Carbon County records, this parcel was patented in 1923 by the Helper State Bank, hence it could not be determined which individual established this small ranch.

Smithsonian Site No.: 42Cb1062
Temporary Site No.: ANADWCCW K/1
Legal Description: T. 13S, R. 10E, Sec. 31, NW, NE, SE
Well Location: Chubbuck A-1
Jurisdiction: Private
Description: This is the Haycock Cemetery situated southeast of Spring Glen along Haycock Lane (Figure 5). The cemetery was originally referred to as the Ewell Cemetery which was the name of the community prior to the formation of the town of Spring Glen (1925). At present the cemetery is deeded to the Haycock family and is enclosed in a chain link fence. At least 22 individuals are buried in the cemetery with graves dating from 1892 to 1989. The earliest families to be interred here were the Stowells and Haycocks, followed by the Jones and Buckleys. The families comprise of both LDS (Stowell and Haycock) and Catholic (Buckley and Haycock) denominations. Prominent individuals buried in this cemetery include Heber J. Stowell (interred 1923), who was the first LDS bishop of Spring Glen in the 1880s. He is known as a founder of Spring Glen and was a major organizer for the historic Spring Glen Canal (Taniguchi 1981). A second historic figure buried in the cemetery is Thomas W. Haycock (interred 1927). He was an English convert to Mormonism and worked in the Castle Gate mines, where he was discharged for being a labor leader sympathizer. Around 1890 he homesteaded 160 acres in Spring Glen and patented the land in the NE corner of Sec. 31 in 1908. A few of his sons and their families are buried in the cemetery, including William B. Haycock, Jess B. Haycock, and Alma W. Haycock. Also E.T. Jones (interred 1912) helped to establish Helper in the 1890s, and was a well-known rancher and fruit grower.

Smithsonian Site No.: 42Cb1063
Temporary Site No.: ANADWCCW K/3
Legal Description: T. 13S, R. 10E, Sec. 31 NW, NE, SE
Well Location: Chubbuck A-1
Jurisdiction: Private
Description: This is a homestead located adjacent to the historic Spring Glen Canal. It consists of a dugout excavated into the west end of a low Mancos Shale ridge (Figure 6). The property was patented as a 160 acre parcel in 1908 by Thomas W. Haycock (Carbon County Court House, Book 6 pg. 390). This site appears to be Thomas W. Haycock's second homestead since his first homestead (built around 1890) is documented in this same area (Horsley 1984:33). Along with his family, Haycock is interred in the Haycock Cemetery.

The dugout is a two room unit constructed from well sorted and trimmed local sandstone blocks, and chinked with clay (Figure 7). The dugout has two outside entrances, although only the south one is intact. The roof is constructed from a pinyon ridge pole overlaid with railroad ties and earth. It

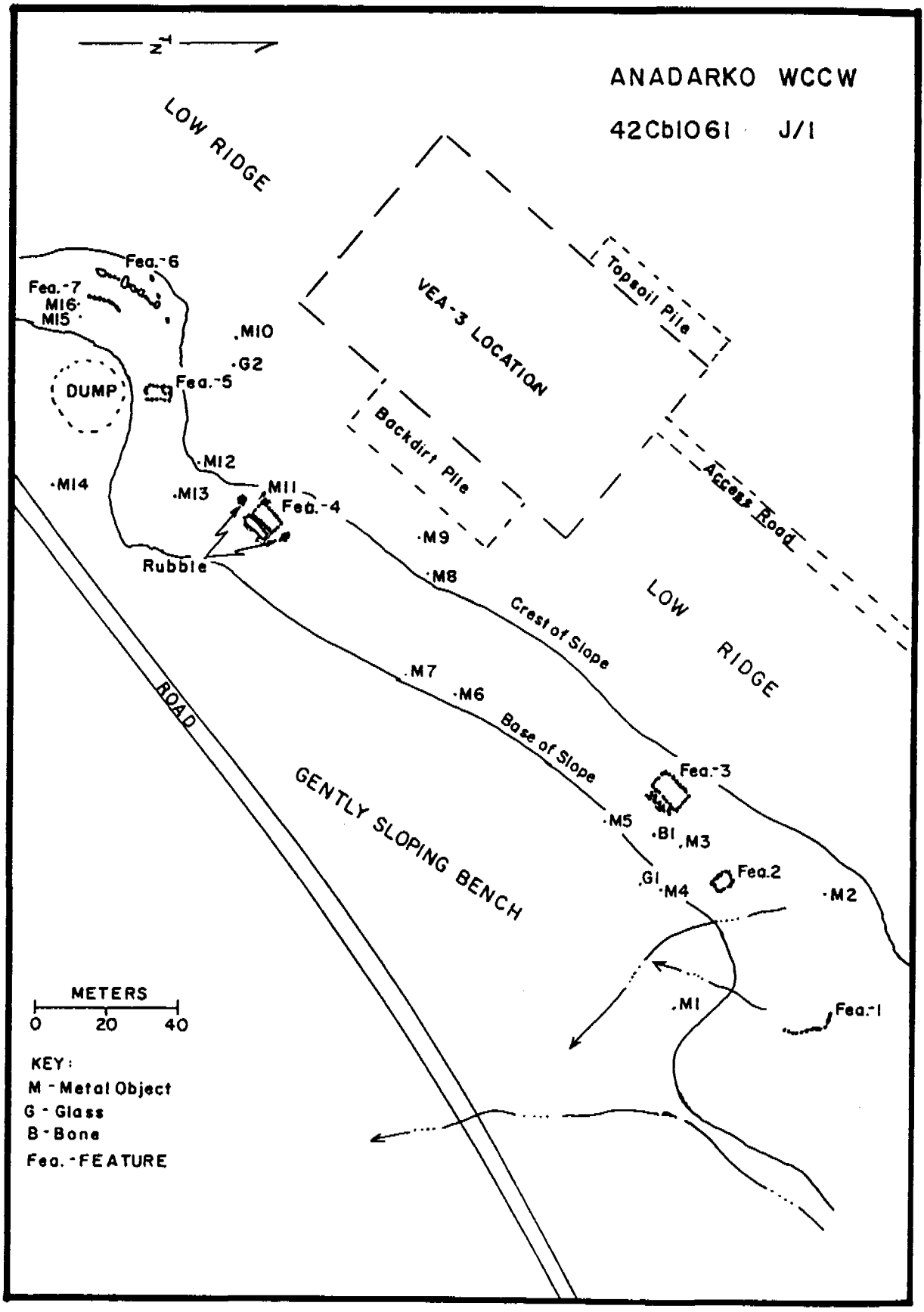

Figure 4. Site 42Cb1061 Map.

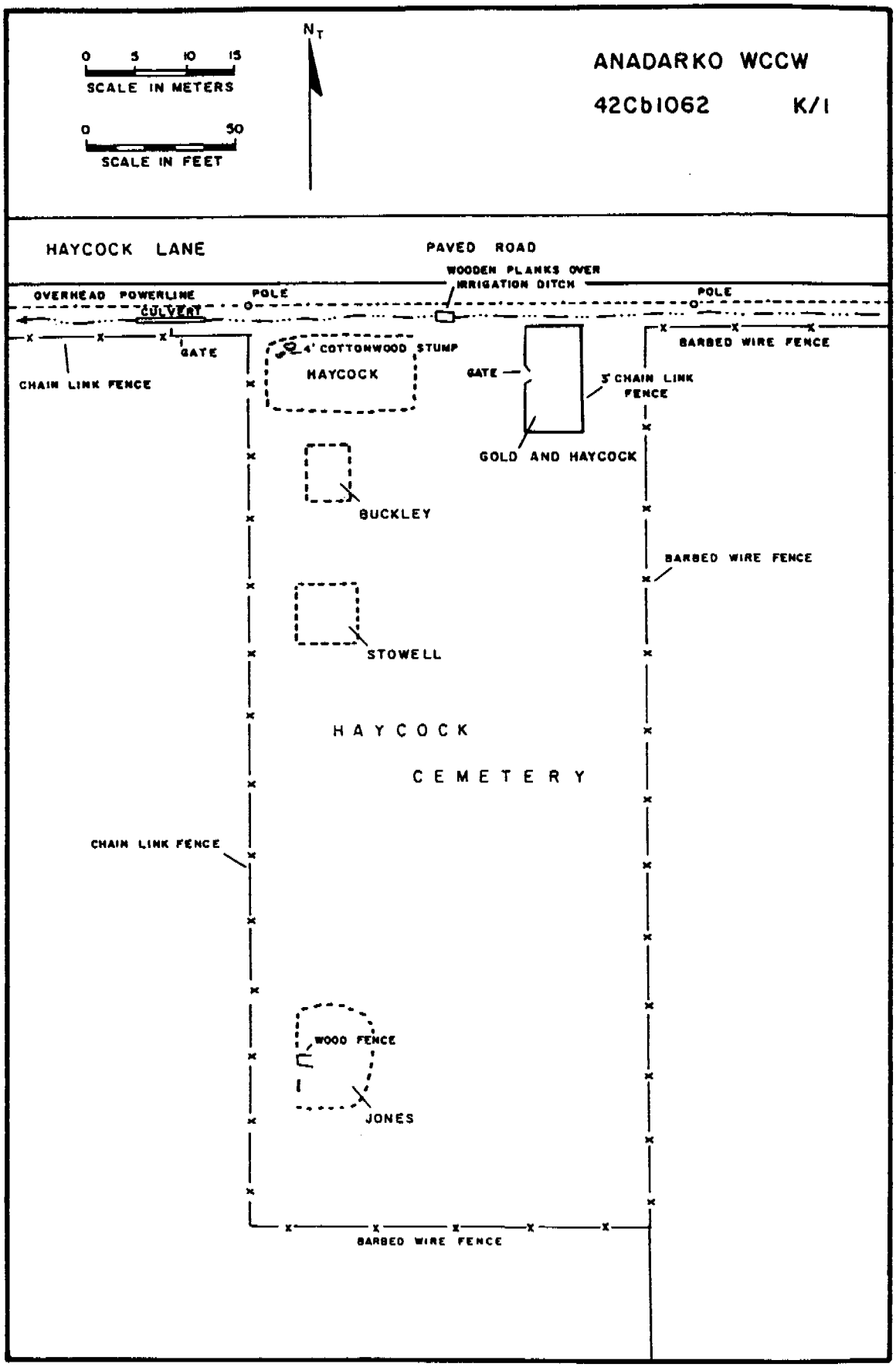

Figure 5. Site 42Cb1062 Map.

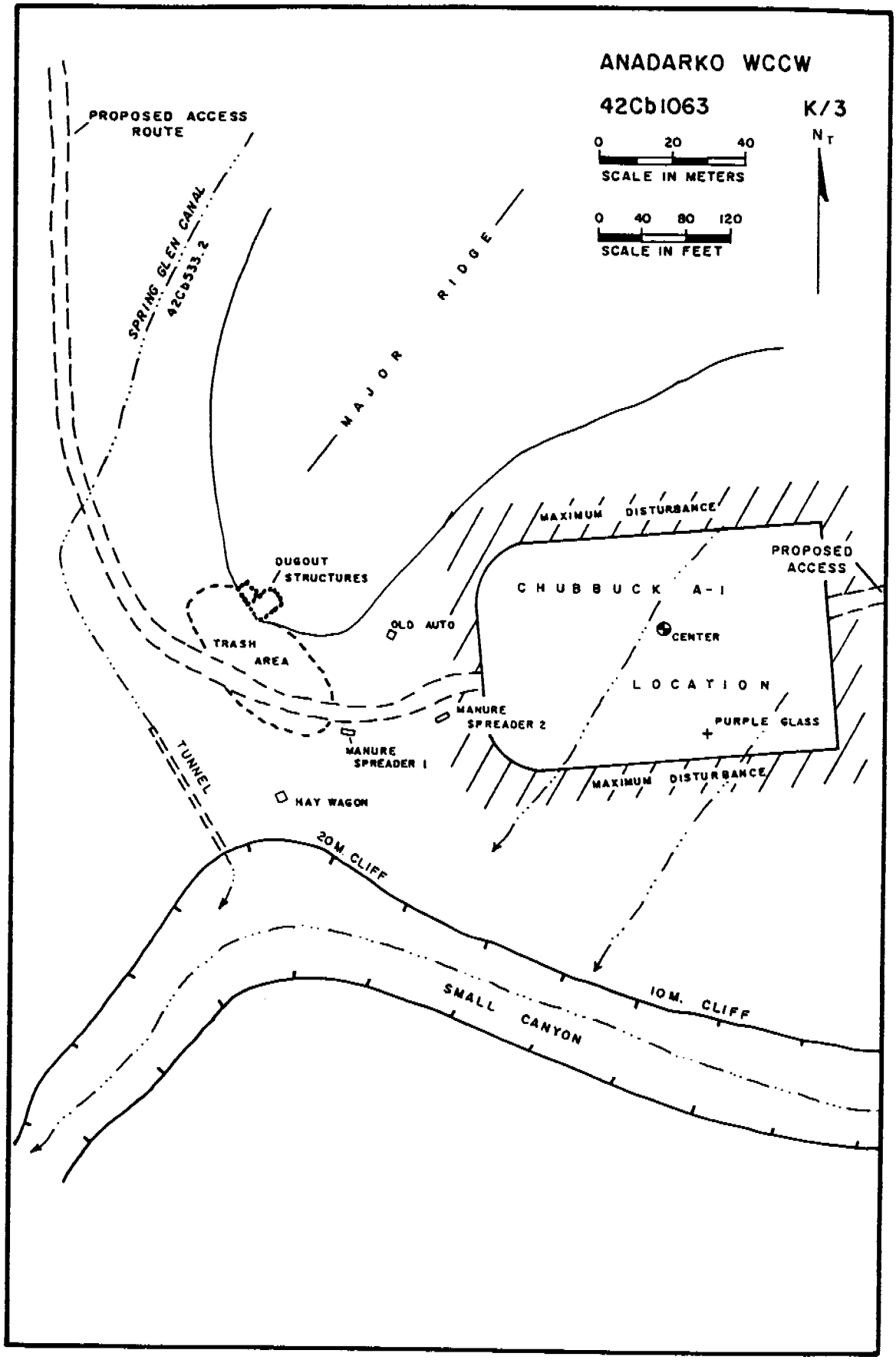

Figure 6. Site 42Cb1063 Map.

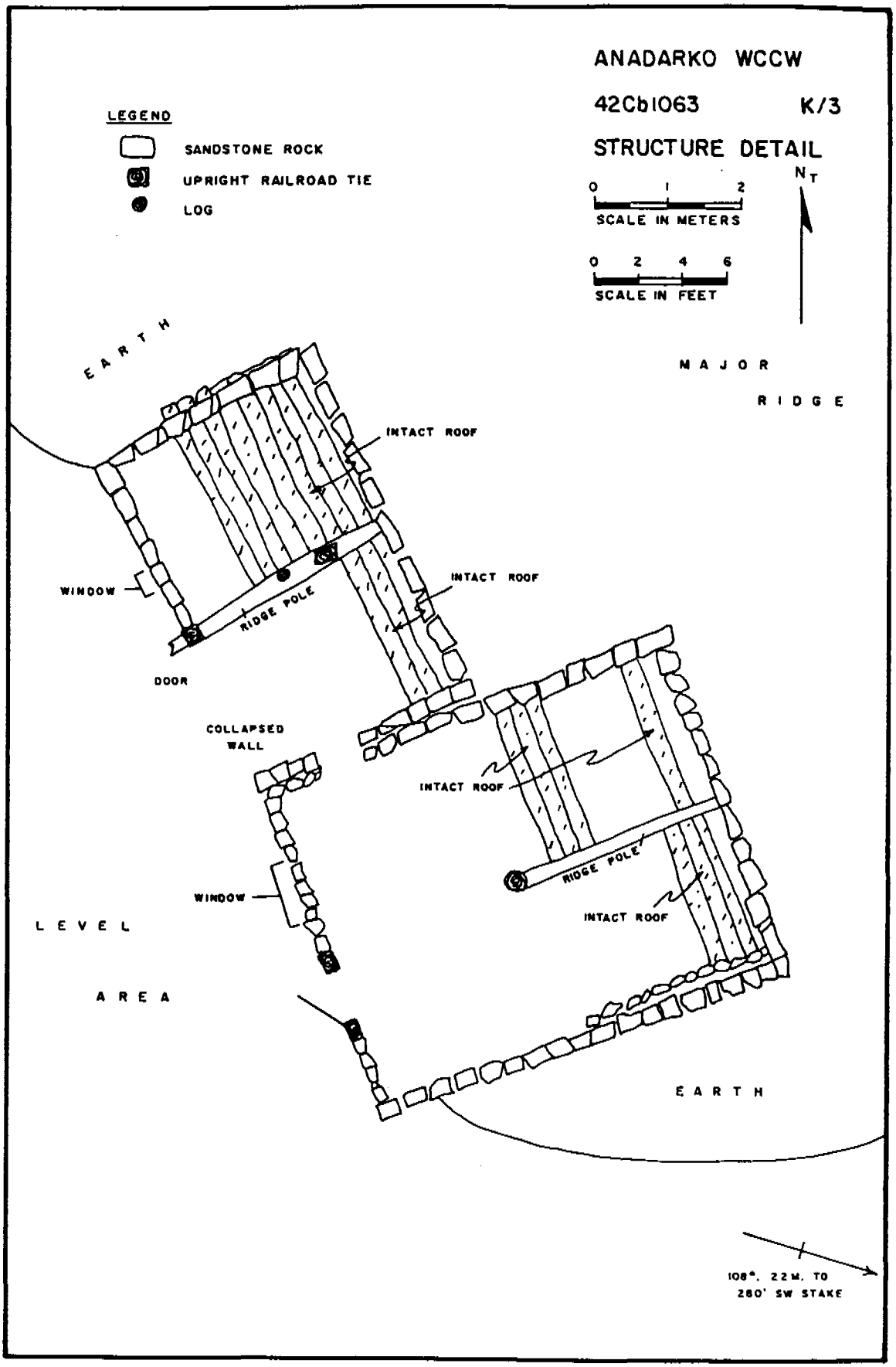

Figure 7. Site 42Cb1063 Structure Detail.

has partly collapsed in the front portion of the structure. The floor is earthen. The average exterior wall height is 5 ft 3 in. In the center of both rooms the roof extends 6 ft 9 in. The south room appears to have been used as a smoke house for processing meat, evidenced by a heavily sooted interior wall. The ridge poles in the south room extend beyond the west wall forming a small open porch. The north room is slightly smaller and shares a common wall and doorway framed with two upright railroad ties. Most of the artifacts were observed in front of the dugout and included both semi-automatic and full automatic bottles, ceramic sherds, sanitary tin cans, and other domestic items. In-period farming equipment and part of a Model T Ford truck were also observed.

Smithsonian Site No.: 42Cb533.2
Temporary Site No.: ANADWCCW K/2
Legal Description: T. 13S, R. 10E, Sec. 31 NW, NE, SE
Well Location: Chubbuck A-1
Jurisdiction: Private
Description: This is a segment of the Spring Glen Canal which was constructed between 1887 and 1893. This canal has been nominated to the NRHP. Adjacent to this canal segment is a masonry dugout (42Cb1063), occupied by the Haycock family in the early 1900s. This documented portion of the canal is earthen, measuring approximately 650 ft long, averaging 3 ft 6 in. wide (bottom), 12 to 16 m (top), and ranges from 3 ft 10 ft deep (Figure 8). At the southeast end of the segment is 120 ft long tunnel, hand excavated into the bedrock. Ditch features included three headgates, several poured-in-place concrete measuring flumes, and a cast iron measuring flume were documented along this ditch. The canal is in-use and maintained by the land owner.

Isolated Finds of Artifacts

Isolated Find A (IF-A) is located in the NW1/4, SE1/4, NW1/4 of Sec. 3, T. 14S., R. 10E.; UTM 518100E and 4387680N (Figure 1). This is a white mottled semi-translucent chert secondary flake found at well location State #A-1.

Isolated Find B (IF-B) is located in the NE1/4, SE1/4, NW1/4 of Sec. 3, T. 14S., R. 10E.; UTM 518180E and 4387630N (Figure 1). This is a large white mottled opaque chert used secondary flake found along the access route into well location State #A-1.

Isolated Find C (IF-C) is located in the NW1/4, NE1/4, SE1/4 of Sec. 3, T. 14S., R. 10E; UTM 518800E and 4387240N (Figure 1). This is a white-yellow variegated semi-translucent chert Stage III biface mid-section, found at well location State #A-6.

Isolated Find D (IF-D) is located in the SW1/4, NE1/4, SW1/4 of Sec. 2, T. 14S., R. 10E.; UTM 519630E and 4386940N (Figure 1). This is a small scatter of purple glass fragments within a 3 m by 3 m area found at well location State #A-7. Diagnostic fragments consisted of a semi-automatic straight brandy or wine finish and a rounded bottle base embossed with "ONE FULL QUART CAPACITY". These appear to be alcohol containers cross-dating to the early 1900s. In addition a flat sidded hinge lid tobacco can was found near the scatter.

Isolated Find E (IF-E) is located in the SE1/4, NE1/4, NW1/4 of Sec. 4, T. 14S., R. 10E.; UTM 516620 and 4387920 (Figure 3). This is a portion of a tan opaque chert projectile point, exhibiting a small tang. It could not be typed and occurred at well location State #D-5.

Isolated Find F (IF-F) is located in the SW1/4, SW1/4, SE1/4 of Sec. 5, T. 14S., R. 10E.; UTM 515160E and 4386620N (Figure 3). This consists of a gray-white chert Stage II biface and a gray-white mottled chert secondary flake. These occurred along the access route into Federal #F-1 and #F-2 well locations.

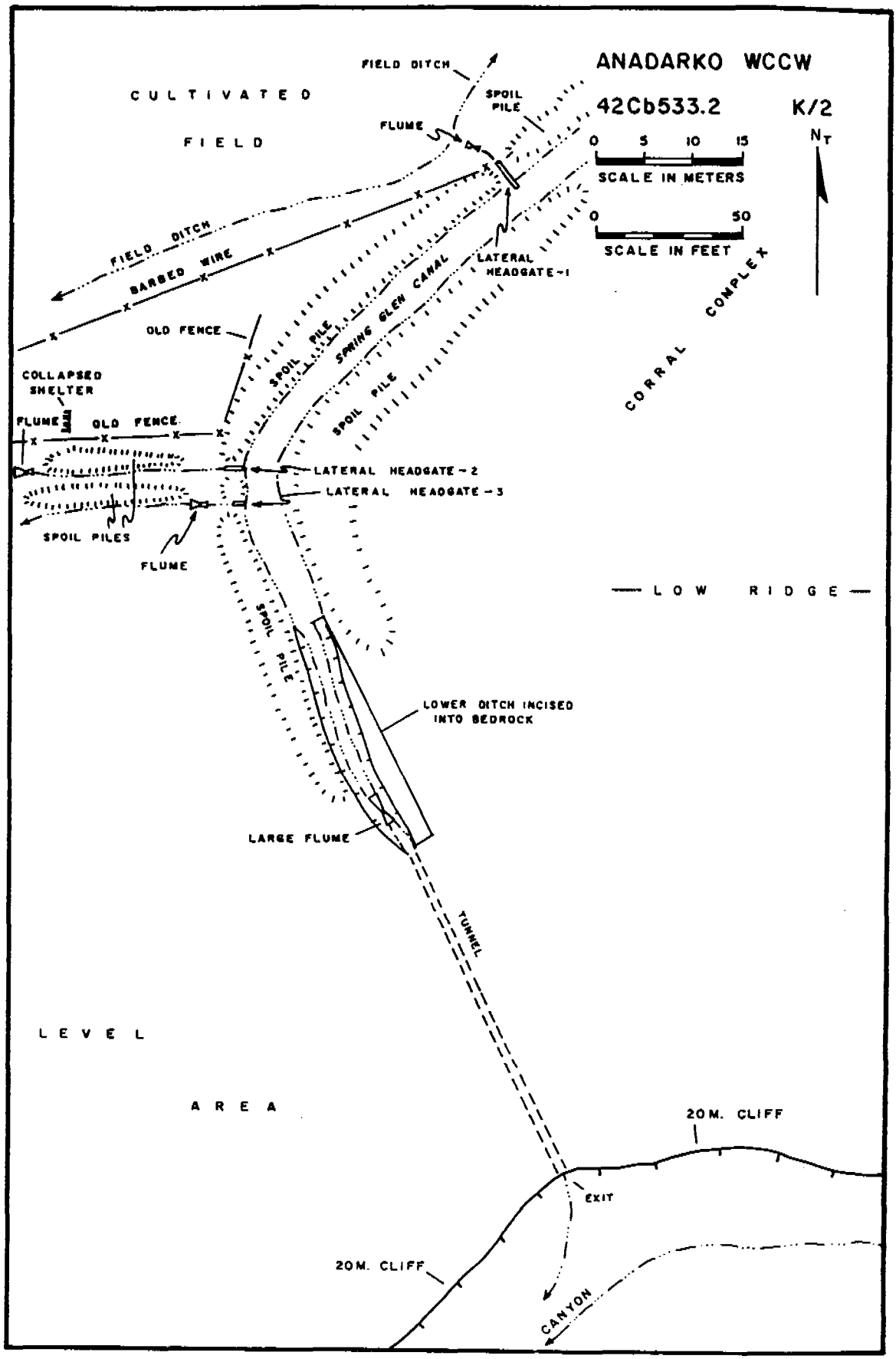

Figure 8. Site 42Cb533.2 Map.

Isolated Find G (IF-G) is located in the SE1/4, SE1/4, SW1/4 of Sec. 5, T. 14S., R 10E.; 515020E and 4386600N (Figure 3). This is a tip of a white semi-translucent chert Stage IV biface found along the access into Federal #F-1 and #F-2 well locations.

Isolated Find H (IF-H) is located the NW1/4, SE1/4, NE1/4 of Sec. 32, T. 13S., R. 10E.; UTM 515600E and 4389230N (Figure 3). This consists of four purple glass body container fragments, found along the access route into Vea-2 well locations.

Isolated Find I (IF-I) is located in the NW1/4, NW1/4, NW1/4 of Sec. 5, T. 14S., R. 10E.; UTM 514350E and 4387930N (Figure 3). This consists of a small sandstone ground stone fragment, two pink-gray mottled chert secondary flakes, and a gray chert tertiary flake within a 3 m by 3.5 m area along the access route into State #D-1 well location.

Isolated Find J (IF-J) is located in the SE 1/4, NE 1/4, NE 1/4 of Sec. 34, T13S., R. 10E.; UTM 518980E and 4289360 N (Figure 1). It is a orange mottled chert secondary flake.

Isolated Find K (IF-K) is located in the NE 1/4, NE 1/4, SE 1/4 of Sec. 31, T. 13S., R. 10E., UTM 514220E and 4388720N (Figure 3). This is a light trash scatter, which was dumped from a barrow. It consists of a clear crown top finish, a hole-in-cap meat tin (3 3/16 x 2 1/2), a clear oval bottle base manufactured by the Owens Illinois Glass Co. (1929-1954), a clear round base condiment bottle embossed with HEINZ, and 2 barrow hoops.

Isolated Find L (IF-L) is located in the NE 1/4, NE 1/4, SE 1/4 of Sec. 31, T. 13S, R. 10E., UTM 514220E and 4388800N (Figure 3). This is a complete clear threaded finish hair tonic bottle manufactured by Owens Illinois Glass Co. (1929-1954), and is embossed with "WILDROOT".

Isolated Find M (IF-M) is located in the NE 1/4, NE 1/4, SE 1/4 of Sec. 31, T. 13S., R. 10E., UTM 514120E and 4388800N (Figure 3). This consists of two fragments of purple body glass and a clear round base bottle manufactured by the Owen-Illinois Glass Co., embossed with "Duraglas" (post-1941).

In addition, a large number of individual erosion control devices were observed along the ridges in Sections 2 and 3, T. 14S., R. 10E. These consisted of hog wire fencing on low juniper posts, rock alignments and earthen dams. Most were placed across small drainages and lacked associated artifacts. These erosion control features are ubiquitous to the landscape, being similar to historic fences. They were not documented and assessed as having limited historic value. These were probably constructed by the Price CCC camp, which operated from 1935 to 1942 (West 1948:131). Apparently considerable erosion control work was completed on approximately 48,000 acres of grazing land in the Price area. These consisted of various types of dams, revetments, water spreading devices, contour ditches, and furrows (Ibid 130).

NATIONAL REGISTER OF HISTORIC PLACES EVALUATION

The National Register Criteria for Evaluation of Significance and procedures for nominating cultural resources to the National Register of Historic Places (NRHP) are outlined in 36 CFR 60.4 as follows:

> The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, material, workmanship, feeling, and association, and that they:
>
> a)...are associated with events that have made a significant contribution to the broad patterns of our history; or

b)...are associated with the lives of persons significant to our past; or

c)...embody the distinctive characteristics of a type, period, or method of construction; or that represents the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d)...have yielded or may be likely to yield information important in prehistory or history.

The cultural resource inventory of this Anadarko Petroleum project resulted in the documentation of four historic sites (42Cb533.2, 42Cb1061, 42Cb1062 and 42Cb1063), and 13 isolated finds of artifacts.

All of the historic sites are considered eligible for nomination to the NRHP. Site 42Cb533.2 is a segment of the Spring Glen Canal built between 1887 and 1893. The canal was evaluated as eligible to the NRHP under Criterion A (Montgomery 1986), and this segment (42Cb533.2) is considered significant. Site 42Cb1061 is an upland ranch occupied between 1900 and 1924. It includes five dry-laid masonry dugout structures, several livestock drift fences and a trash scatter. Site 42Cb1063 is an early 20th century farm, homesteaded by Thomas W. Haycock consisting of a sandstone block two room dugout. Both 42Cb1061 and 42Cb1063 are evaluated as eligible to the NRHP under Criteria C and D. The architectural features embody the distinctive characteristics of a type, period and method of construction, and good representations of dugout structures built from local materials. In addition, there is potential for buried cultural materials and features within the structures, and trash scatters which could yield additional information pertinent to research domains concerning intra-site function and chronology/cultural affiliation. The Haycock Cemetery (42Cb1062) is evaluated as not eligible for nomination to the NRHP. The cemetery fails to be significant in terms of funerary design as defined by a particular period of history. Also the graves of the prominent historic figures (e.g., Edwin Stowell and Thomas W. Haycock) are not the sole remaining property in the area associated with these individuals. The 13 isolated finds of artifacts are not considered eligible to the NRHP, since they lack additional research value.

MANAGEMENT RECOMMENDATION

The Anadarko Warehouse Canyon to Cardinal Wash project resulted in the recordation of four historic sites and 13 isolated finds of artifacts. No paleontological resources were observed in the project area. Site 42Cb1061 is considered eligible to the NRHP under Criteria C and D. This site occurs along the southwest side of Anadarko's proposed Vea A-3 well location. If construction activities are confined within the boundaries of this well pad as indicated by the engineering plans, then the site will not be impacted by the proposed undertaking. Three historic sites (42Cb533.2, 42Cb1062 and 42Cb1063) were documented along the Chubbuck A-1 alternate access road from Haycock Lane. If feasible, it is advised that the proposed access route from the east is used, and that construction of the Chubbuck A-1 well location be confined within the boundaries as indicated by the engineering plans. In the event that the western route from Haycock Lane is selected, it is recommended that: 1) the access route adjacent to the Haycock Cemetery (42Cb1062) be monitored for graves outside the fence; 2) the features along the Spring Glen Canal be avoided; 3) the dugout at 42Cb1063 be avoided from construction activities; and 4) the trash area of 42Cb1063 be tested by an archaeologist for intact subsurface cultural deposits or features.

In conclusion, if the site avoidance procedures are implemented, a determination of **no effect** is recommended pursuant to Section 106, CFR 800 for this project.

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APPENDIX A

SITES 42Cb1061, 42Cb1062 and 42Cb1063
INTERMOUNTAIN ANTIQUITIES COMPUTER SYSTEM (IMACS) SITE FORM

On File At:

Utah Division of State History
Salt Lake City, Utah

IMACS SITE FORM

PART A - ADMINISTRATIVE DATA

1. **STATE NO.:** 42Cb1061
2. **AGENCY NO.:**
3. **TEMP NO.:** ANADWCCW J/1
4. **STATE:** Utah **COUNTY:** Carbon
5. **PROJECT:** Anadarko Warehouse Canyon and Cardinal Wash Drill Locations
6. **REPORT NO.:** U-96-MQ-0536b,s,p
7. **SITE NAME/PROPERTY NAME:**
8. **CLASS:** [ ] **PREHISTORIC** [X] **HISTORIC** [ ] **PALEONTOLOGIC** [ ] **ETHNOGRAPHIC**
9. **SITE TYPE:** Habitation
10. **ELEVATION:** 6120 ft
11. **UTM GRID:** **Zone** [12] [514820] **E** [4388300] **N**
12. [NE1/4] **of** [SE1/4] **of** [SW1/4] **and** [SW1/4] **of** [SE1/4] **of** [SW1/4] **of Section** [32] **Township** [13S] **Range** [10E].
13. **MERIDIAN:** Salt Lake City
14. **MAP REFERENCE:** Helper, UT 7.5', 1972
15. **AERIAL PHOTO:**
16. **LOCATION AND ACCESS:** Starting from US 6 & 50 within Price, drive north on 300 E for 1.15 mi. Turn west onto tower road and travel approximately 2.35 miles to the overhead powerline. Follow the powerline road northwest through Warehouse Canyon for 1.6 miles. Cross under the powerline and proceed southwest for about 0.75 miles to the site area.
17. **LAND OWNER:** Private
18. **FEDERAL ADMIN. UNITS:**
19. **LOCATION OF CURATED MATERIALS:**
20. **SITE DESCRIPTION:** This is a ranching habitation site situated just northwest of Warehouse Canyon between the towns of Spring Glen and Carbondale. The site occurs along the slope of a low pinyon-juniper ridge overlooking a sagebrush flat which was probably a grazing area for sheep or cattle. It appears to have been a small ranch occupied during the early 1900s. County records show that the land was patented in 1923, owned by the Helper State Bank. Architectural features consist of four dry-laid masonry structures excavated into a southeast facing ridge slope. The construction material is local well-sorted (undressed) sandstone rocks and boulders. Most of the above ground surface stone walls have collapsed, although subterraean walls and foundations are intact. The structures lacked evidence of a superstructure, although trees from the surrounding area were probably employed, evidenced by the numerous axe-cut stumps surrounding the featuares. Several of the structures may have been burned exhibited by interior wall oxidization. Features 2, 3 and 4 appear to have been used as domiciles and only a small amount of trash was found in association. Feature 5, which is smaller, appears to have been used as the kitchen/storage structure, since the trash dump is located downslope from the room. Historic items found at the site indicates that wagons were used by the occupants and water was brought in by barrows. The nearest water is the historic Spring Glen Canal.
21. **SITE CONDITION:** [ ] **EXCELLENT** [X] **GOOD** [ ] **FAIR** [ ] **POOR**
22. **IMPACT AGENT(S):** Structural Decay and Erosion
23. **NAT. REGISTER STATUS:** [X] **SIGNIFICANT**
    [ ] **NON-SIGNIFICANT**
    [ ] **UNEVALUATED**

JUSTIFY: This is a habitation site related to livestock ranching dating to the early 1900s. The site is evaluated as eligible to the NRHP under Criteria c and d. The dry-laid masonry dugouts embody distinctive characteristics of a type, period, and method of construction representative of an early ranch habitation. There is additional potential for buried cultural materials and features within the structures and trash dump which could yield additional information pertinant to research domains concerning intra-site function and chronology/cultural affiliation.

IMACS SITE FORM: 42Cb1061, PART A (Cont.)

24. **PHOTOS:** Roll 536 Exp. 1-12
25. **RECORDED BY:** Jacki and Keith Montgomery
26. **SURVEY ORGANIZATION:** Montgomery Archaeological Consultants
27. **ASSISTING CREW MEMBERS:**
28. **SURVEY DATE:** 10-3-96

LIST OF ATTACHMENTS:

[ ] PART B	[X] PART C
[X] TOPO MAP	[X] SITE MAP
[X] PHOTOS	[ ] OTHER
[ ] ARTIFACT/FEATURE SKETCH	

PART A - ENVIRONMENTAL DATA

29. **SLOPE:** [5] (Degrees) [180] **ASPECT** (Degrees)
30. **DISTANCE TO PERMANENT WATER:** [10] X 100 METERS
    TYPE OF WATER SOURCE:
    [ ] SPRING/SEEP
    [ ] STREAM/RIVER
    [ ] LAKE
    [X] OTHER
    NAME OF WATER SOURCE: Spring Glen Canal
31. **GEOGRAPHIC UNIT:** Bookcliff-Roan Plateau Colorado Plateau
32. **TOPOGRAPHIC LOCATION**
    PRIMARY LANDFORM: Ridge
    SECONDARY LANDFORM: Slope
    DESCRIBE: The site is situated on the slope of a low ridge
33. **ON-SITE DEPOSITIONAL CONTEXT:** Residual
    DESCRIPTION OF SOIL: Tannish-gray silty sand with rocks
34. **VEGETATION**
    A. **LIFE ZONE:** Upper Sonoran
    B. **COMMUNITY**
    PRIMARY ON-SITE: Low Sagebrush
    SECONDARY ON-SITE: Pinyon-juniper
    SURROUNDING SITE: Low Sagebrush
    DESCRIBE: Low sagebrush, pinyon, juniper, rabbitbrush, Russian thistle, snakeweed, prickly pear cactus, yucca, cheat grass, and mint.
35. **MISCELLANEOUS TEXT:**
36. **COMMENTS/CONTINUATIONS:**

IMACS SITE FORM: 42Cb1061

PART C - HISTORIC SITES

1. **SITE TYPE:** Habitation
2. **HISTORIC THEME(s):** Farming/Ranching
3. **CULTURE:**

CULTURAL AFFILIATION	DATING METHOD
Euroamerican	Historical Record

DESCRIBE: This site appears to have been used by Euroamerican ranchers in the area.

4. **OLDEST DATE:** 1900 **RECENT DATE:** 1924
HOW DETERMINED: The earliest date is derived from the 1900 Indian head penny and semi-automatic bottles. It appears the habitation was used into the early 1920, based on glass finishes (e.g., crown tops, external thread) which date post 1912. The only trademark "WF&S MIL" dates from 1900 to 1921. All the tin cans were sanitary type which were in general use after 1920.
5. **SITE DIMENSIONS:** [180 N-S] M by [260 E-W] M
Area [36738] **Sq. M**
6. **SURFACE COLLECTION/METHOD:** N/A
SAMPLING METHOD:
7. **ESTIMATED DEPTH OF CULTURAL FILL:** Fill noted but exact depth unknown (E)
How estimated (If tested, show location on map): There is depth potential inside the structurea and in the trash midden.
8. **EXCAVATION STATUS:** [ ] **EXCAVATED**
[ ] **TESTED**
[X] **UNEXCAVATED**

TESTING METHOD: N/A

9. **SUMMARY OF ARTIFACTS AND DEBRIS:** Bucket (BB), Farm Tools (FT), Stove Parts (SP), Ammunition (AM), Button (BU), Bolts/Nuts (BL), Wire (WI), Coin (CD), Shoes (SO), Coal (CA), Kitchen Utensils (KU), Jar Lids (JL), Key-opened tin cans (KC), Sanitary Cans (TC), Crockery (VI), Plate (VE), Bone (B)), Ceramic (CS), Glass (GL)
DESCRIBE: The majority of the historic items were concentrated in the trash dump associated with Feature 5 (storage/kitchen). These included ceramics, sanitary tin cans and glass items. Other artifacts found in the dump included an indian head penny (dated 1900), 4 barrow straps, round bit shovel, 12 gauge shot gun cartridge (REM-UMC,MERO CLUB), parts from a metal stove, large smashed bucket, gray enamelware pan, metal 10 in. frying pan, zinc canning lid, assorted metal braces and washers, nuts and bolts, glass button (4 holes), metal chain and several rubber heels. In addition pieces of coal were dispersed throughout the dump indicating fuel for a stove. Point provinenced artifacts consisted of a cow metatarsal (B-1), barrow hoops (M-1, M-12, M-13, M-14), part of a hoe (M-2), metal scrap (M-5, M-15), and part of a wagon (M-16).
10. **CERAMIC ARTIFACTS:**

PASTE GLAZE/ SLIP	DECOR-RATION	PATTERN	VESSEL FORMS (S)	#
white/white	painted	floral	plate	1
white/white	mold	floral	dish	1
white/white	no	no	unknown	25
brown/tan	no	no	crockery	15

ESTIMATED NUMBER OF CERAMIC TRADEMARKS: [3]
DESCRIBE: All of the ceramic sherds occurred in the dump and included: an ironstone plate sherd with a hand painted green/pink floral design; a white semi-porcelain (hotel ware) dish sherd with a molded floral pattern; 15 or more sherds of crockery (tan-black specked exterior), one which is a rounded rim piece (7/16 in. thick); and 15+ sherds of white ironstone.

IMACS SITE FORM: 42Cb1061, PART C (Cont.)

11. **GLASS:**

#	MANUFACTURE	COLOR	FUNCTION	TRADEMARK	DECORATION
2	full-auto	green	beer	WF&S	none
1	semi-auto	green	medicine	no	none
2	full-auto	green	beer	no	none
1	unknown	purple	medicine	yes	none
1	full-auto	purple	beverage	no	none
2	unknown	purple	stoppers	no	yes
1	unknown	milk	top	no	yes

DESCRIBE: Most of the historic items were clustered in the trash dump associated with Feature 5 and included fragments of green (50+), purple or amethyst (20+), brown (15+), and clear (8+) glass. Diagnostic glass items from the dump include: two green glass champagne beer container round bases embossed with WF&S MIL 57 and WF&S MIL 18. These probably connected with the crown tops found in the vicinity. The trademark is the William Franzen & Son, Milwaukee, Wis., manufactured between 1900 and 1921. A semi-automatic green medicine bottle had a prescription finish and four panel body (manufacture pre-1904). A purple glass elixir base embossed with a 2 was found in the dump. A large purple glass cut glass flat topped, eight faceted stopper appears to be from a decanter bottle (3 cm wide). An external thread (full-automatic) purple glass finish. A decorated milk glass stopper may have been from a cosmetic or culinary container lid. Individual glass items mapped across the site consisted of; G-1 green side panel from a probable medicine bottle and G-2 six purple body container fragments.

12. **MAXIMUM DENSITY #/SQ. M (glass and ceramics):** 15 sq. meter

13. **TIN CANS:**

TYPE	OPENING	SIZE	MODIFIED	LABEL/MARK	FUNCTION
sanitary	cut around	smashed	no	none	unknown
sanitary	key opened	smashed	no	none	meat/fish

DESCRIBE: Most of the tin cans are cut-around smashed sanitary labels which appear to be single serving size. Point-provinenced tin cans were also cut-around sanitary containers which were smashed (M-3, M-4, M-6, M-7, M-8, M-9, M-10, and M-11).

14. **LANDSCAPE AND CONSTRUCTED FEATURES (locate on site map):** 3-Rock Alignment (RA), 1-Trash Dump (DU)

DESCRIBE: Feature 1 appears to be a dry-laid masonry drift fence situated along the east edge of the complex. It is slightly curved measuring approximately 12 m long and constructed from two courses of sandstone boulders and rocks. It averages in height 70 cm from the surrounding ground surface. In the immediate area are number of axe-cut trees and a few artifacts. Located on the southwest edge of the site are several rock livestock drift fences. Feature 6 is an informal alignment of loosely stacked unsorted sandstone rocks and in-situ boulders which appears to have functioned as a livestock drift fence. Beneath the wall is a lower alignment of boulders and large rocks which probably functioned as a drift fence. The dump is associated with Feature 5 (storage-kitchen) and was fairly concentrated containing an array of domestic items. It appears to have some potential for subsurface artifacts.

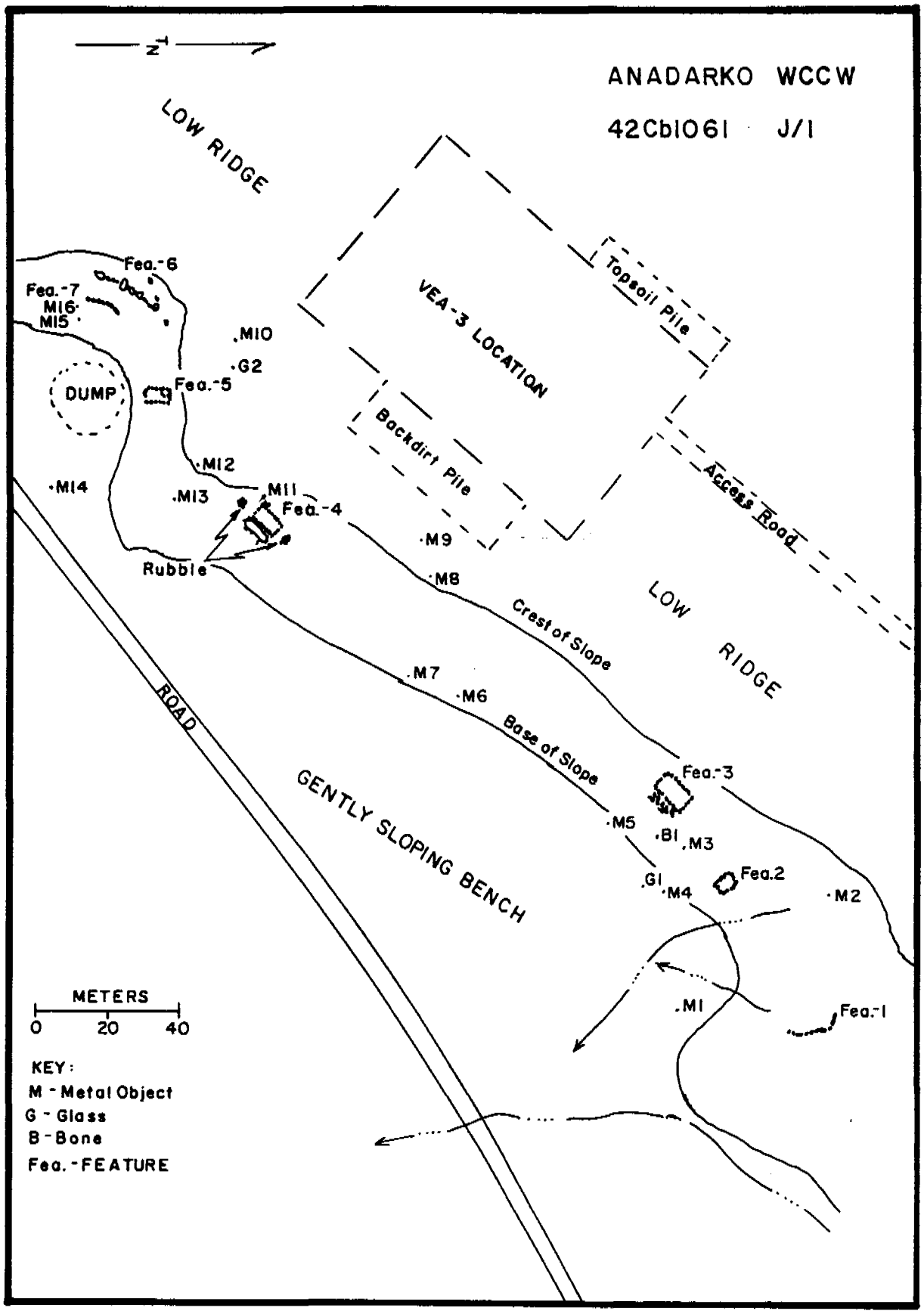
IMACS SITE FORM: 42Cb1061, PART C (Cont.)

15. **BUILDINGS AND STRUCTURES (locate on site map):**

#	MATERIAL	TYPE
4	Stone	Single-room Structure

DESCRIBE: All of the habitation structures have been excavated into the slope of the low ridge. Feature 2 is a single room dry-laid masonry structure measuring approximately 6 m NW-SE by 5 m NE-SE. It was excavated into the ridge sloped and lined with sorted sandstone rocks. Most of the walls have collapsed both inward and outward. The north wall is fairly intact consisting of two dry-laid alignments of sandstone rocks measuring 1.8 m wide and 40 cm high (above the floor). It lacked evidence of a doorway and superstructure. Some of the rocks are oxidized suggesting that the structure has burned. Feature 3 is a larger dugout single room dry-laid masonry structure, measuring approximately 10 m NE-SW by 6 m NW-SE. The east wall is the most intact consisting of four courses of well-sorted sandstone rocks, which extend a maximum height of 88 cm above the floor. This wall slopes to the southeast. The north wall is mostly rubble, piled about 2.15 m above the floor. Larger sandstone rocks have been selected for the foundation of this structure. The opening was probably in the southwest corner. Growing in the interior of the room was culinary mint. The structure lacked evidence of a roof and a trash scatter. Feature 4 is the best preserved structure in this habitation complex. It occurs in the southwest portion of the site and consists of a one or two room dugout rectangular dry-laid masonry structure. It measures approximately 8.3 m NE-SW by 5.5 m NW-SE. The north wall is fairly well-preserved consisting of four courses of well-sorted sandstone rocks, extending a height of 1 meter above the interior floor. Larger stones were used for the foundation and average in size L=50 cm, W=35 cm. The south wall presently consists of a single layer of intact sandstone rocks adjacent to a soil berm. Wall rubble has been piled in recent years along the northeast and southwest sides of the structure. There is no evidence of the entrance or roof. Feature 5 is a smaller dry-laid masonry dugout measuring approximately 7 m north-south by 4 m east-west. It was excavated into the slope of the ridge with the highest wall (west wall) extending 1.10 m above the floor. The west wall presently consists of three to four courses of fairly well-sorted sandstone rocks which slopes south. The east wall has been partially dismantled with rocks employed to construct a more recent post and dry-laid masonry interior room (possible lambing pen). The entrance was on the south side of this structure where the trash scatter is situated. The only formal trash dump occurs adjacent to Feature 5 which suggests that this structure may have been the storage and kitchen room.

16. **COMMENTS/CONTINUATIONS:** The records at the Carbon County Court House in Price, UT indicated that the land was patented as 480 acres on February 14, 1923, from the State of Utah to Helper State Bank. The property remained in this ownership until the 1940s.


ANADARKO WCCW
42Cb1061 J/1
N
LOW RIDGE
Fea.-6
Fea.-7
M16
M15
M10
G2
DUMP
Fea.-5
M12
M14
M13
M11
Fea.-4
Rubble
VEA-3 LOCATION
Topsoil Pile
Backdirt Pile
Access Road
M9
M8
Crest of Slope
LOW RIDGE
M7
M6
Base of Slope
ROAD
GENTLY SLOPING BENCH
Fea.-3
M5
B1
M3
G1
M4
Fea.2
M2
M1
Fea.-1
METERS
0 20 40
KEY:
M - Metal Object
G - Glass
B - Bone
Fea. - FEATURE

42Cb1061. Overview of site area showing Feature 1 (drift fence) and Feature 2 (structure) in background. Photograph is viewed to the north. Roll 536:1.

42Cb1061. Photograph is viewed to the northeast showing Feature 1 (drift fence) in the foreground. Roll 536:2.

42Cb1061. Photograph is viewed to the WNW showing Feature 2 in the foreground (masonry structure). Roll 536:3.

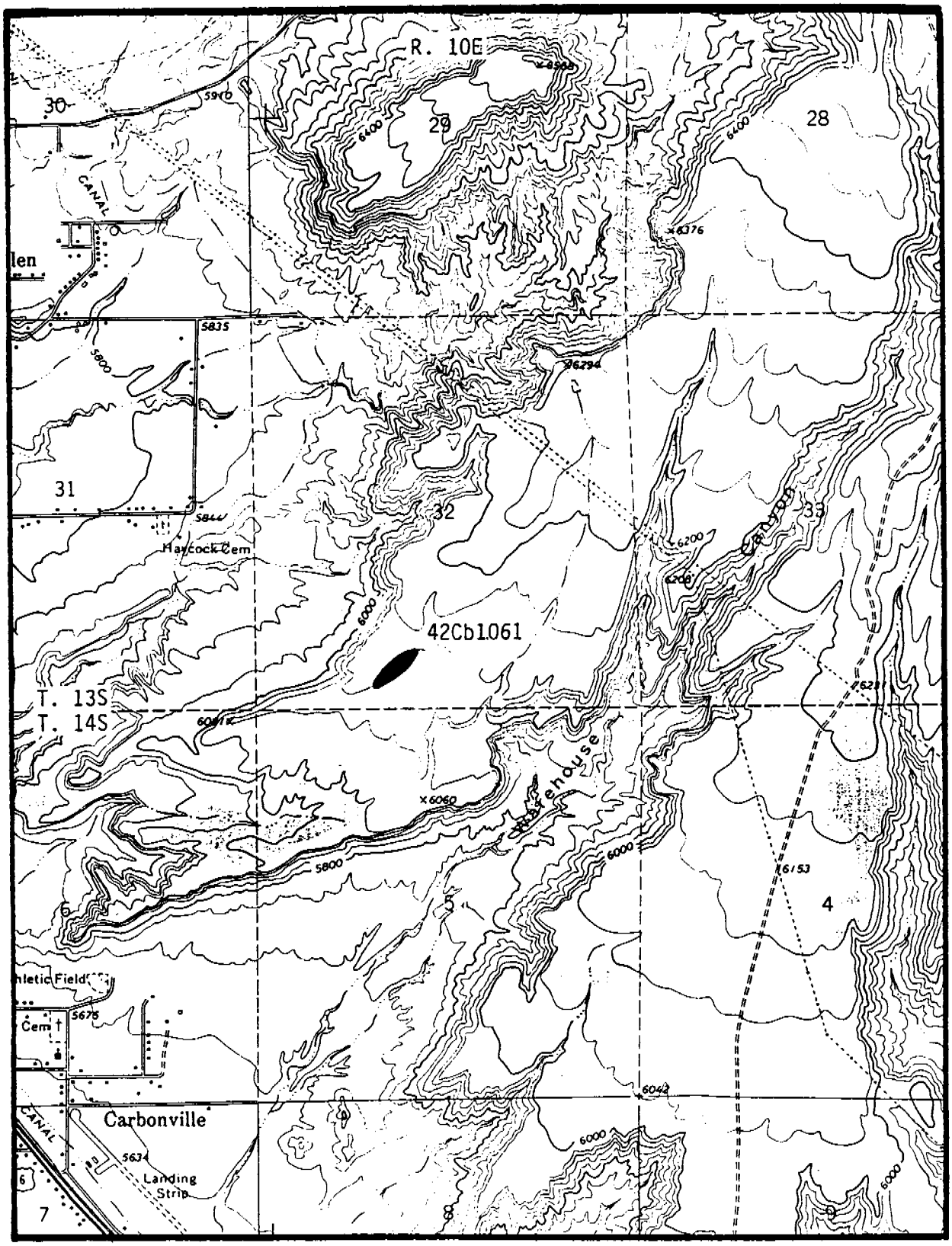
42Cb1061. Photograph is viewed to the east showing close-up of the east dry-laid masonry wall of Feature 3. Roll 536:5.

42Cb1061. Overview of site area showing Features 1, 2, and 3 in the background along ridge slope. Photograph is viewed to the east. Roll 536:6.

42Cb1061. Photograph is viewed to the south showing Feature 4 (masonry structure) in the foreground. Roll 536:7.

42Cb1061. Photograph is viewed to the south showing close-up of Feature 5 (masonry structure). Roll 536:11.

42Cb1061. Photograph is viewed to the west showing Features 6 and 7 (drift fences) in foreground. Roll 536:12.



Site 42Cb1061. USGS Helper, UT 7.5' 1972. Scale 1:24000

IMACS SITE FORM

PART A - ADMINISTRATIVE DATA

1. **STATE NO.:** 42Cb1062
2. **AGENCY NO.:**
3. **TEMP NO.:** ABADWCCW K/2
4. **STATE:** Utah **COUNTY:** Carbon
5. **PROJECT:** Anadarko Warehouse Canyon and Cardinal Wash Drill Locations
6. **REPORT NO.:** U-96-MQ-0536b,s,p
7. **SITE NAME/PROPERTY NAME:** Haycock Cemetery
8. **CLASS: [ ] PREHISTORIC [X] HISTORIC [ ] PALEONTOLOGIC [ ] ETHNOGRAPHIC**
9. **SITE TYPE:** Cemetery
10. **ELEVATION:** 5840 feet
11. **UTM GRID: Zone [12] [513850] E [4388900] N**
12. **[NW1/4] of [NE1/4] of [SE1/4] of Section [31] Township [13S] Range [10E].**
13. **MERIDIAN:** Salt Lake City
14. **MAP REFERENCE:** USGS Helper, UT 7.5', 1972
15. **AERIAL PHOTO:**
16. **LOCATION AND ACCESS:** The cemetery is located southeast of the main town of Spring Glen, Utah. Just south of Spring Glen turn off of US-6 onto SR-157. Turn south onto Main Street and proceed about 1 mile. Turn east onto Haycock Lane and drive approximately 0.85 miles to the cemetery, located on the south side of this road.
17. **LAND OWNER:** Private
18. **FEDERAL ADMIN. UNITS:**
19. **LOCATION OF CURATED MATERIALS:**
20. **SITE DESCRIPTION:** This cemetery was originally referred to as the Ewell Cemetery which was the name of the community prior to the formation of the town of Spring Glen (1925). At present the cemetery is deeded to the Haycock family. At least 22 individuals are buried in the cemetery, dates of interrment extending from 1892 to 1989. The cemetery appears to be still in-use and is enclosed with a chain linked and barbed wire fence.

    The earliest families to be interred in this cemetery were the Stowells and Haycocks, followed by the Jones and Buckleys. The families comprise of both Mormon (Stowell and Haycock) and Catholic (Buckley and Haycock) denominations. Prominent individuals buried in this cemetery include: Heber J. Stowell (interred 1923), who was the LDS bishop of Spring Glen in the 1880s, known as a founder of the townsite and the Spring Glen Canal (Taniguchi 1981). Also, Thomas W. Haycock (interred 1927) was a prominent citizen and farmer in the area. He was an English convert to Mormonism and worked in the Castle Gate mines where he was discharged for being in sympathy with a labor leader. Around 1890 he homesteaded 160 acres in Spring Glen and patented the land adjacent to the cemetery in 1908. His sons which are also buried in the cemetery are William B. Haycock (see Obituary), Jess B. Haycock, and Alma W. Haycock. Also E.T. Jones (interred 1912) helped to establish Helper in the 1890s, and was a well known rancher and fruit grower (see Obituary).

    In comparison to the nearby NRHP eligible Spring Glen Cemetery, the Haycock burial ground fails to be significant as to: a) association with important local or regional events; b) funerary design or craft of a period of history; c) although certain prominent individuals of Spring Glen are interred, the graves probably are not the sole property remaining associated with these individuals. For example, the dugout homesteads (e.g., including 42Cb1063) of Thomas W. Haycock still occur in Spring Glen.
21. **SITE CONDITION: [ ] EXCELLENT [X] GOOD [ ] FAIR [ ] POOR**
22. **IMPACT AGENT(S):** Structural Decay

IMACS SITE FORM: 42Cb1062, PART A (Cont.)

23. **NAT. REGISTER STATUS:** [ ] **SIGNIFICANT**
[X] **NON-SIGNIFICANT**
[ ] **UNEVALUATED**

JUSTIFY: The cemetery is evaluated as not eligible for nomination to the NRHP. The cemetery fails to be significant in terms of funerary design as defined by a particular period of history. Also the graves of certain prominent historic figures in Spring Glen probably are not the sole property remaining associated with these individuals.

24. **PHOTOS:** Roll 536:2 Exp. 1-11
25. **RECORDED BY:** Keith Montgomery and Jacki Montgomery
26. **SURVEY ORGANIZATION:** Montgomery Archaeological Consultants
27. **ASSISTING CREW MEMBERS:**
28. **SURVEY DATE:** November 1, 1996

LIST OF ATTACHMENTS:
[ ] **PART B** [X] **PART C**
[X] **TOPO MAP** [X] **SITE MAP**
[X] **PHOTOS** [X] **OTHER**
[ ] **ARTIFACT/FEATURE SKETCH**

PART A - ENVIRONMENTAL DATA

29. **SLOPE:** [2] **(Degrees)** [360] **ASPECT (Degrees)**
30. **DISTANCE TO PERMANENT WATER:** [2] **X 100 METERS**
TYPE OF WATER SOURCE: [ ] **SPRING/SEEP**
[ ] **STREAM/RIVER**
[ ] **LAKE**
[X] **OTHER**
NAME OF WATER SOURCE: Spring Glen Canal
31. **GEOGRAPHIC UNIT:** Bookcliff-Roan Plateau Colorado Plateau
32. **TOPOGRAPHIC LOCATION**
PRIMARY LANDFORM: Valley
SECONDARY LANDFORM: Valley
DESCRIBE: The site is located in the Price River Valley
33. **ON-SITE DEPOSITIONAL CONTEXT:** Residual
DESCRIPTION OF SOIL: Gray clayey silt (Mancos Shale)
34. **VEGETATION**
A. LIFE ZONE: Upper Sonoran
B. COMMUNITY
PRIMARY ON-SITE: Big Sagebrush
SECONDARY ON-SITE: Big Sagebrush
SURROUNDING SITE: Big Sagebrush
DESCRIBE: Big Sagebrush, rabbitbrush, cottonwoods, Russian olives, and grasses.
35. **MISCELLANEOUS TEXT:**
36. **COMMENTS/CONTINUATIONS:**

IMACS SITE FORM: 42Cb1062

PART C - HISTORIC SITES

1. **SITE TYPE:** Cemetery
2. **HISTORIC THEME(s):** Funerary
3. **CULTURE:**

CULTURAL AFFILIATION	DATING METHOD
European/American	Historical Record

DESCRIBE: The cemetery is for the Haycocks and several other families who were of European/American (mainly from England) ancestry.

4. **OLDEST DATE:** 1892 **RECENT DATE:** 1989
HOW DETERMINED: Grave Headstones
5. **SITE DIMENSIONS:** [90 N-S] M by [40 E-W] M
Area [11304] **Sq. M**
6. **SURFACE COLLECTION/METHOD:** N/A
SAMPLING METHOD: N/A
7. **ESTIMATED DEPTH OF CULTURAL FILL:** Fill noted but exact depth unknown
How estimated (If tested, show location on map):
8. **EXCAVATION STATUS:** [ ] **EXCAVATED**
[ ] **TESTED**
[X] **UNEXCAVATED**

TESTING METHOD: N/A
9. **SUMMARY OF ARTIFACTS AND DEBRIS:**
DESCRIBE:
10. **CERAMIC ARTIFACTS:**

PASTE	GLAZE/ SLIP	DECOR-RATION	PATTERN	VESSEL FORMS (S)	#

ESTIMATED NUMBER OF CERAMIC TRADEMARKS: [ ]
DESCRIBE: N/A
11. **GLASS:**

#	MANUFACTURE	COLOR	FUNCTION	TRADEMARK	DECORATION

DESCRIBE: N/A
12. **MAXIMUM DENSITY #/SQ. M (glass and ceramics):**
13. **TIN CANS:**

TYPE	OPENING	SIZE	MODIFIED	LABEL/MARK	FUNCTION

DESCRIBE: N/A
14. **LANDSCAPE AND CONSTRUCTED FEATURES (locate on site map):** Burials
DESCRIBE: This historic cemetery contains a number of graves which are primarily arranged according to families, most originally related to Thomas W. Haycock (1949-1927). The individual graves were documented according to the family plots.

I. Jones Family Plot. Located in the southwest corner of the cemetery. Approximately six graves were noted, most designated by wooden markers which lacked names or dates, and is probably where some of the Jones' nine children are buried. The only engraved headstone was a hand carved decorated sandstone marker for Edwin T. Jones Oct 11 1856-Aug 4 1912 (see Obituary) and Anna Sofie Born Jan 1 1867 to ?? "She was the Sunshine of our Home". Note: one of the graves (with wooden marker) is enclosed by an old wooden picket fence.

II. Stowell Family Plot. Located between the Jones and Buckley's along the west side of the cemetery defined by a concrete block enclosure. The most prominent individual in this plot is Heber J. Stowell who was bishop of Spring Glen in the 1880s. Most of the headstones are machine inscribed marble set into cement or simple wooden crosses. Approximately 7 individuals are buried in this plot, and it appears that some of the headstones were erected sometime after the early individuals were interred.

a. Heber John 1860 - 1923 and Ellen Lavina Stowell 1869 - 1959
b. Easton Earl Stowell PFC Co C 10 Field Signal BN, WWI Jan 25 1895 - Jan 21, 1944.
c. John Stowell July 15, 1910 - Nov 24 1935
d. "Daughter" Gladys Jane Stowell 1908 - 1912
e. "Son" Clarence Heber Stowell 1892 - 1905
"Mother" Emily Jane Frisby Thompson 1838 - 1896
f. Stella Lavinia Stowell 1890 - 1892

III. Buckley Family Plot. This is a small plot containing about six individuals located between the Stowells and Haycocks. The headstones are very similar, consisting of machine cut gray marble or bronze set in cement.

a. Andrew J. Buckley July 8 1878 - Nov 9 1947 and Etta May B. Apr 18 1889 - Aug 24 1959 (see Obituary)
b. Emmett Joseph Buckley Dec 4 1918 - Aug 20 1987
c. Pauline Buckley (Mar 28 1930 - Mar 21 1931), Andrew J. Buckley (Mar 31 1920 - June 3 1920), and Ellen Madaline (Apr 10 1932 - Dec 21 1933)

IV. Haycock Family Plot. This plot is located in the northwest corner of the cemetery and contains the largest number of individuals family members. A variety of headstones mark the graves in this area. The oldest markers consist of two plain hand engraved sandstone headstones, with most of the grave markers being machine cut marble set in concrete. Several plots are delineated by poured-in-place concrete or concrete block enclosures (e.g., defining couples or groups of children). Interestingly, some of the children belong to Thomas W. and Phoebe E. Haycock who were interred in this portion of the cemetery, probably because they died prior to their parents.

a. Thomas W. Haycock 1849 - 1927 and Mary Ann 1850 - 1926
b. William B. Haycock Oct 28 1875 - Nov 28 1937 (see obituary) and Elizabeth Aug 2 1883 - Oct 10 1951.
c. Joseph Raymond Nov 15 1908 - Aug 13 1909 "Son of T.W. and P.E. Haycock"
d. Elizabeth Dec 16 1912 - June 1 1918 "Daughter of T.W. and Phoebe Haycock"
e. Erma Haycock May 25 1929 - Sept 30 1930 and Infant Son Haycock Nov 4 1908
f. Infant Haycock Born and Died July 2 1934
g. Jess B. Haycock Sept 1 1887 - Jan 20 1946 and Ruth M. Apr 24 1902 - Nov 9 1974
h. Father Joseph Haycock Dec 19 1930 - April 25 1989 (marble headstone is engraved with a miner).

V. Haycock and Gold Family Plot. This plot is located in the northeast corner of the cemetery enclosed by a recently erected chain link fence. Several of the individuals were siblings of Thomas W. Haycock or relations.

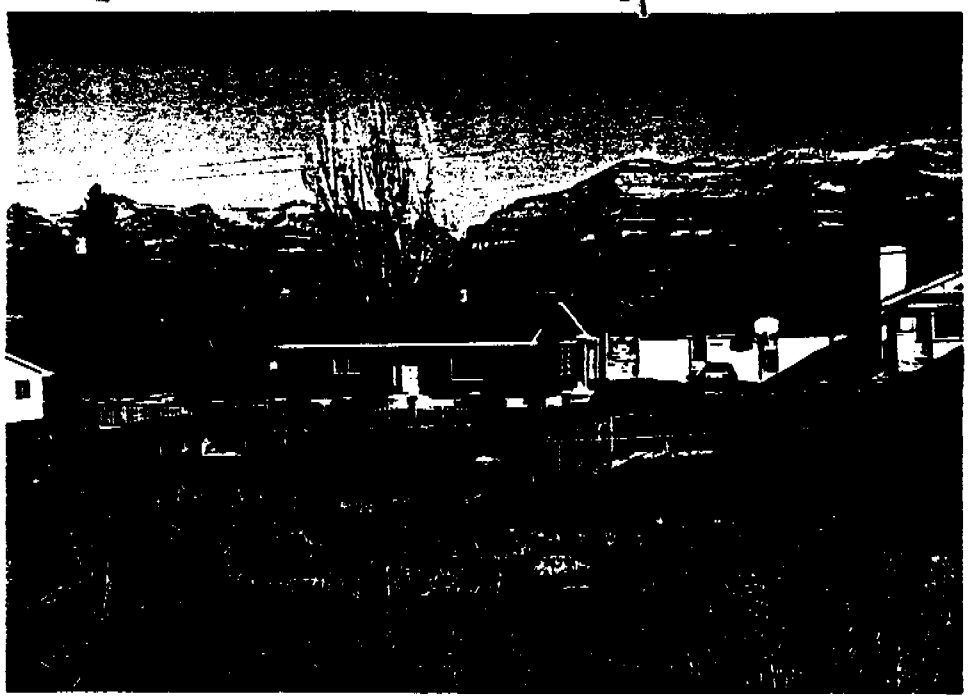
a. Thomas W. Haycock Jan 29, 1880 - Sept 10 1964 (Note: son of Thomas W. Haycock Sr., see Obituary) and Phoebe E. June 9 1885 - July 1 1965
b. "Father" Alma W. Haycock Jan 10 1882 - Oct 4 1961
c. GOLD "Mother" Flossie Haycock Oct 21 1902 - June 25 1977 and "Father" James Andrew Nov 15 1895 - Oct 30 1951
d. "Our Baby Haycock" Oct 26-27 1943

15. **BUILDINGS AND STRUCTURES (locate on site map):**

#	MATERIAL	TYPE

DESCRIBE: N/A

16. **COMMENTS/CONTINUATIONS:** Records: Carbon County Court House, Book 6 pg. 390.

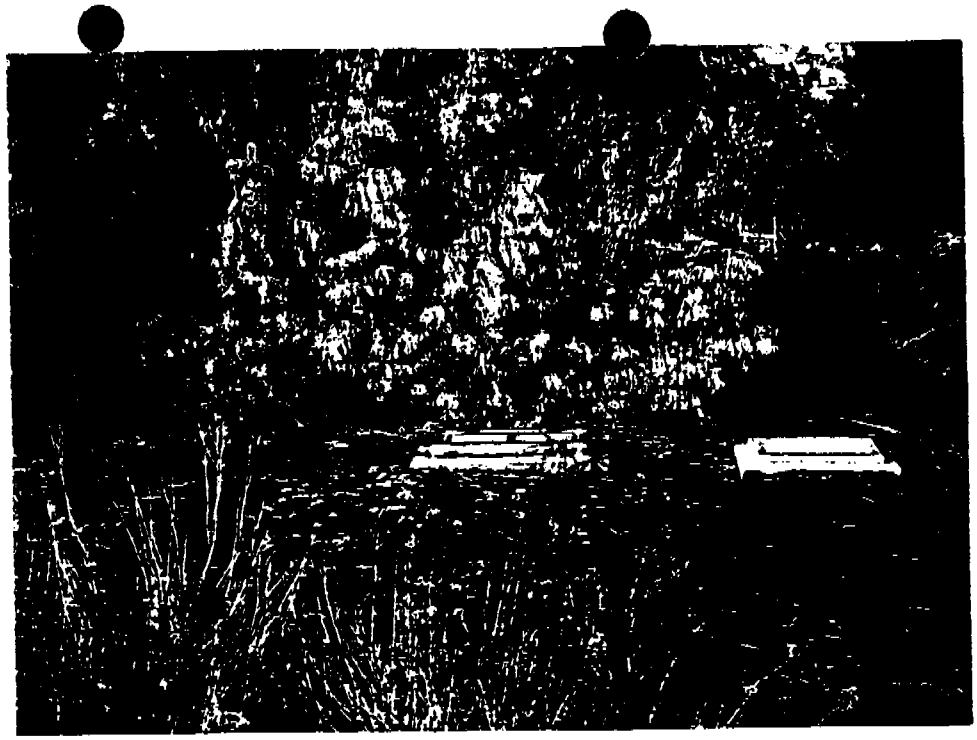


42Cb1062 Overview of Haycock Cemetery taken to the north showing plots in foreground. Roll 36:2/1.

42Cb1062 Photo viewed to NNW showing Haycock Family plot graves in background. Roll 536:2/2.

42Cb1062 Photo viewed to the west showing Stowell Family plot in foreground. Roll 536:2/3

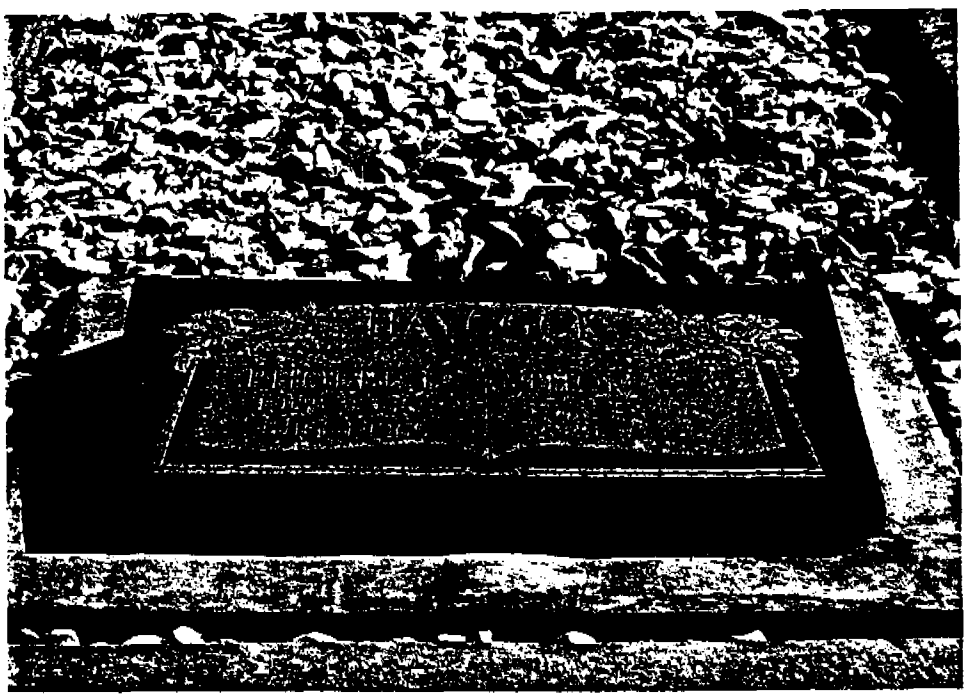
42Cb1062 General view of Haycock Cemetery taken to the northeast showing Gold-Haycock Family plot in background. Roll 536:2/4.



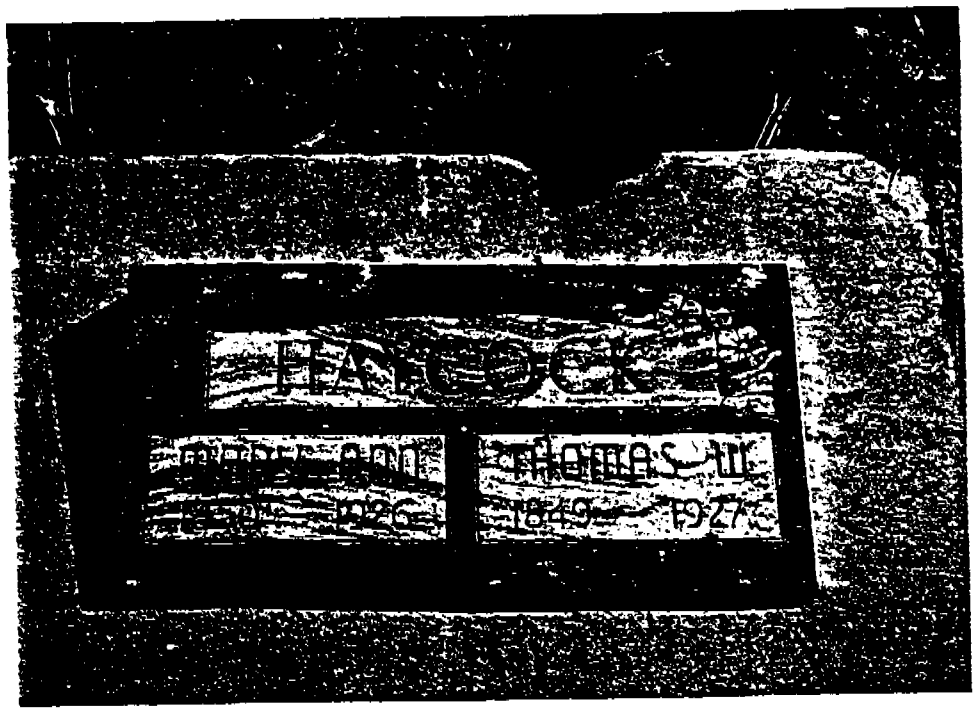
42Cb1062 Photo viewed to the west showing Buckley Family plot in the foreground. Roll 536:2/5.

42Cb1062 Photo viewed to the west showing close-up of Joseph Raymond Haycock and Elizabeth Haycock markers. Roll 536:2/6.

42Cb1062 Close-up of Edwin and Anna headstone in the Jones Family plot, viewed to the east. Roll 536:2/7.



42Cb1062 Close-up of Thomas W. and Phoebe E. grave marker in the Gold-Haycock Family plot. Roll 536:2/9.



42Cb1062 Close-up of Thomas W. and Mary Ann Haycock grave marker in Haycock Family plot (northwest corner of cemetery). Roll 536:2/10.

HELPER MAN IS KILLED BY TRAIN

CAUGHT BY NO. 4 AT SPRING GLEN CROSSING.

E. T. Jones, Well Known Ranchman, Meets With Fatal Accident Last Saturday Night While Returning From Kenilworth—Buggy Is Demolishesd While Horse Is Carried Into Price On Pilot Of Engine.

About 1 o'clock Saturday morning E. T. Jones, a well known rancher and fruit raiser, residing about one mile above Helper was killed at the railroad crossing at Spring Glen, being hit by No. 4, which was passing at the time.

Jones left home early Saturday morning to go to Kenilworth on business and did not start back till after midnight. He was driving a one-horse rig at the time. The horse was carried on the pilot a distance of six miles to Price before anyone knew that an accident had occurred. The engineer stated that he thought that he had struck something at Spring Glen.

Marshal Bryner and D. J. Thomas went to the scene of the accident and found the demolished buggy and the body of Jones. No one will ever know how it occurred. The body was not disfigured but had been thrown up against the fence near to the track with enough force to cause death immediately. Jones had been a resident of Carbon county for twenty years, was a well respected citizen and had raised a family of nine children. He was about 60 years old. He owned a small farm just above Helper and had been employed in putting up ice for the railroad company for many years.

The funeral of Jones was held at his residence above Helper Tuesday, the burial taking place at the Ewell cemetery at Spring Glen.

Obituary of William B. Haycock
The Helper Journal, December 2, 1937

SPRING GLEN PIONEER DIES OF STOMACH AILMENT

William B. Haycock, 62, of Spring Glen, died at his home Sunday of cancer. He moved to Spring Glen from England with his parents 54 years ago, and was very active in the early settlement of the community in which he died. He was born in England February 18, 1875, and had been engaged in the painting business most of his life.

Surviving are his widow, Elizabeth Haycock; four sons, Wm. H., Frank, Fred and Larry of Spring Glen; five daughters, Mrs. Marry A. Keene, Mrs. Virginia Mathena, Miss Vivian G Haycock, Spring Glen; Mrs. Euphinia Olmstead and Mrs. Sylvia Olmstead, Oregon; there are also eight grandchildren and three brothers, Alma W., Salt Lake; T. W. Spring Glen; J. B., Clear Creek.

Funeral services were held in the Spring Glen school house Wednesday afternoon with Bishop Silas Rowley in charge. Interment was in the private Haycock cemetery at Spring Glen, under direction of the Wallace Mortuary.

Obituary of E. T. Jones
Eastern Utah Advocate, August 8, 1912

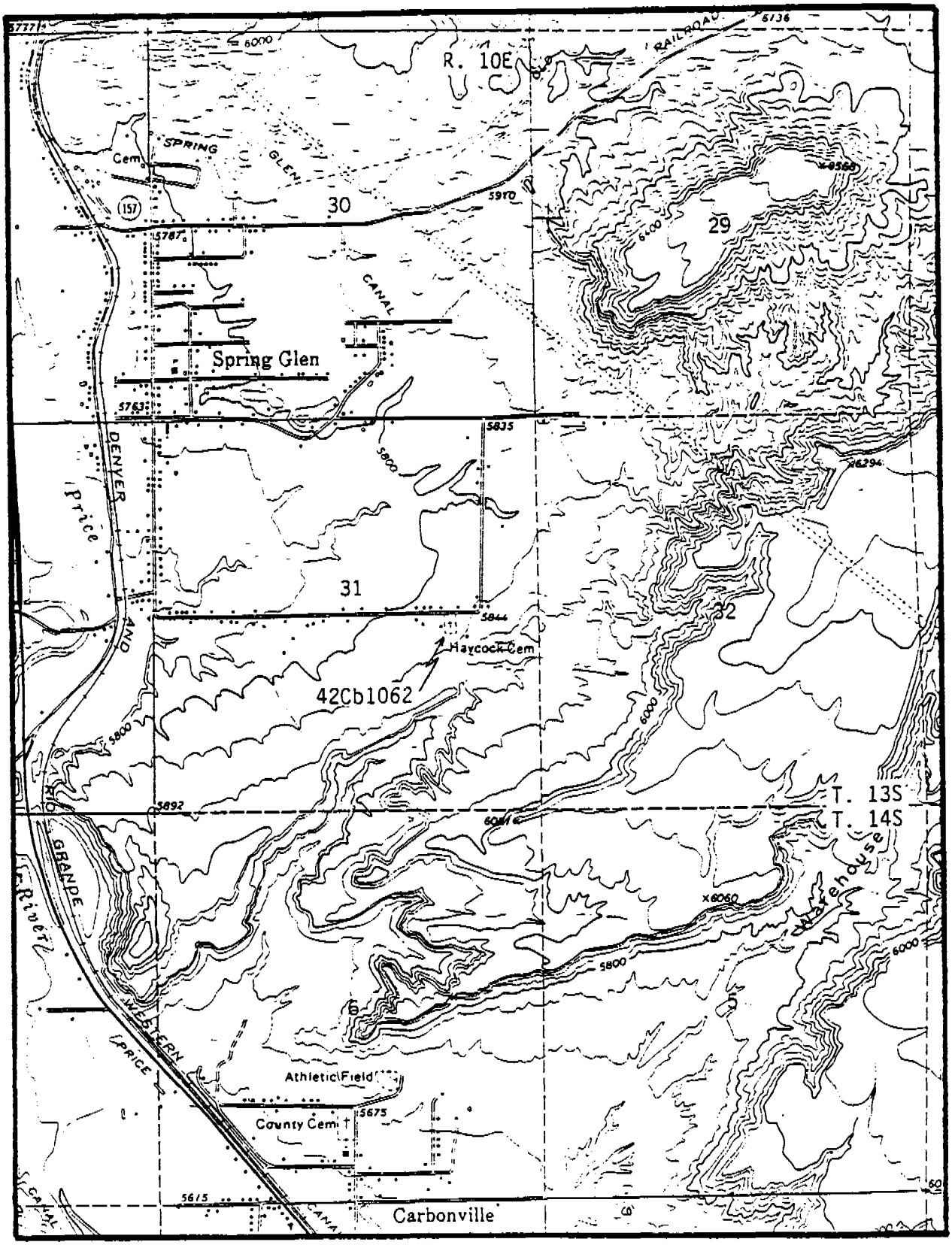
Spring Glen Resident Funeral Rites Set For Tomorrow

Final rites will be held tomorrow morning at 10 o'clock in the St. Anthony Catholic church for Andrew Jackson Buckley, 69, longtime resident of Carbon county who died at his home in Spring Glen Sunday at 2:30 following a lingering illness.

Holy Rosary will be recited tonight (Thursday) at 8:30 at the Mitchell Funeral home and burial will be in the Spring Glen Cemetery.

He was born July 8, in Newberry Port, Mass., a son of John and Mary O'Leary Buckley. He came to Carbon county 47 years ago.

Obituary of Andrew Jackson Buckley
The Helper Journal, November 13, 1947



Site 42Cb1062. USGS Helper, UT 7.5', 1972. Scale 1:24 000

IMACS SITE FORM

PART A - ADMINISTRATIVE DATA

1. **STATE NO.:** 42Cb1063
2. **AGENCY NO.:**
3. **TEMP NO.:** ANADWCCW K/2
4. **STATE:** Utah **COUNTY:** Carbon
5. **PROJECT:** Anadarko Warehouse Canyon and Cardinal Wash Drill Locations
6. **REPORT NO.:** U-96-MQ-0536b,s,p
7. **SITE NAME/PROPERTY NAME:**
8. **CLASS:** [ ] **PREHISTORIC** [X] **HISTORIC** [ ] **PALEONTOLOGIC** [ ] **ETHNOGRAPHIC**
9. **SITE TYPE:** Habitation
10. **ELEVATION:** 5880 feet
11. **UTM GRID:** **Zone** [12] [513950] **E** [4388740] **N**
12. [NW1/4] **of** [NE1/4] **of** [SE1/4] **of Section** [31] **Township** [13S] **Range** [10E].
13. **MERIDIAN:** Salt Lake City
14. **MAP REFERENCE:** USGS Helper, UT 7.5', 1972
15. **AERIAL PHOTO:**
16. **LOCATION AND ACCESS:** Just south of Spring Glen turn off of US-6 onto SR-157. Turn south onto Main Street and proceed about 1 mile. Turn east onto Haycock Lane and drive approximately 0.85 miles to the Haycock cemetery. Walk along the north fence line for approximately 400 ft to the Spring Glen Canal. The site is located about 50 ft south of the canal against a ridge.
17. **LAND OWNER:** Private
18. **FEDERAL ADMIN. UNITS:**
19. **LOCATION OF CURATED MATERIALS:**
20. **SITE DESCRIPTION:** This is a homestead located adjacent to the historic Spring Glen Canal. It consists of a dugout excavated into the west end of a low Mancos Shale ridge. The property was patented as a 160 acre parcel in 1908 by Thomas W. Haycock (Carbon County Court House, Book 6 pg. 390). He was an English convert to Mormonism and worked in the Castle Gate mines where he was discharged for expressing sympathy with a labor leader. This site appears to be Thomas W. Haycock's second homestead since his first homestead (built around 1890) is documented in this same area (Horsley 1984:33). Along with his family Haycock is interred in the nearby Haycock Cemetery.

    The structure is a two room unit excavated into the bank of a low east-west trending ridge. It is constructed from well sorted and trimmed local sandstone blocks, and chinked with clay. The dugout has two outside entrances, although only the south one is intact. The roof is constructed from a pinyon ridge pole overlaid with railroad ties and earth. It has partly collapsed in the front portion of the structure. The floor is earthen. The average exterior wall height is 5 ft 3 in. In the center of both rooms the roof extends 6 ft 9 in. The south room appears to have been used as a smoke house for processing meat, evidenced by a heavily sooted interior wall. The ridge poles in the south room extend beyond the west wall forming a small open porch. The north room is slightly smaller and shares a common wall and doorway framed with two upright railroad ties. Most of the artifacts were observed in front of the dugout and included both semi-automatic and full automatic bottles, ceramic sherds, sanitary tin cans, and other domestic items. In-period farming equipment and part of a Model T Ford truck were also observed.

21. **SITE CONDITION:** [ ] **EXCELLENT** [X] **GOOD** [ ] **FAIR** [ ] **POOR**
22. **IMPACT AGENT(S):** Structural Decay

IMACS SITE FORM: 42Cb1063, PART A (Cont.)

23. **NAT. REGISTER STATUS:** [X] **SIGNIFICANT**
[ ] **NON-SIGNIFICANT**
[ ] **UNEVALUATED**

JUSTIFY: This is an early example of a dugout homestead which retains good physical integrity. It is considered eligible under Criteria C of the NRHP based on type, period and method of construction. Also the site is eligible under Criterion D, since it has potential for buried historic artifacts could yield additional information pertaining to the history of the area.

24. **PHOTOS:** Roll 536:2 Exp. 1-10
25. **RECORDED BY:** Keith Montgomery and Jacki Montgomery
26. **SURVEY ORGANIZATION:** Montgomery Archaeological Consultants
27. **ASSISTING CREW MEMBERS:**
28. **SURVEY DATE:** November 1, 1996

LIST OF ATTACHMENTS:

[ ] **PART B**	[X] **PART C**
[X] **TOPO MAP**	[X] **SITE MAP**
[X] **PHOTOS**	[ ] **OTHER**
[ ] **ARTIFACT/FEATURE SKETCH**	

PART A - ENVIRONMENTAL DATA

29. **SLOPE:** [2] **(Degrees)** [270] **ASPECT (Degrees)**
30. **DISTANCE TO PERMANENT WATER:** [0] **X 100 METERS**
TYPE OF WATER SOURCE:
[ ] **SPRING/SEEP**
[ ] **STREAM/RIVER**
[ ] **LAKE**
[X] **OTHER**
NAME OF WATER SOURCE: Spring Glen Canal
31. **GEOGRAPHIC UNIT:** Bookcliff-Roan Plateau Colorado Plateau
32. **TOPOGRAPHIC LOCATION**
PRIMARY LANDFORM: Valley
SECONDARY LANDFORM: Ridge

DESCRIBE: The site is situated at the base of a ridge along the edge of Price River Valley.

33. **ON-SITE DEPOSITIONAL CONTEXT:** Residual
DESCRIPTION OF SOIL: Gray fine silty sand (Mancos Shale)
34. **VEGETATION**
A. LIFE ZONE: Upper Sonoran
B. COMMUNITY
PRIMARY ON-SITE: Low Sagebrush
SECONDARY ON-SITE: Low Sagebrush
SURROUNDING SITE: Pinyon-juniper

DESCRIBE: Low Sagebrush and mint.

35. **MISCELLANEOUS TEXT:**
36. **COMMENTS/CONTINUATIONS:**

IMACS SITE FORM: 42Cb1063

PART C - HISTORIC SITES

1. **SITE TYPE:** Habitation
2. **HISTORIC THEME(s):** Ranching/Farming
3. **CULTURE:**

CULTURAL AFFILIATION	DATING METHOD
European/American	Historical Record

DESCRIBE: The dugout was built by Thomas W. Haycock. The property was patented on August 14 1908, granted by the United States as part of the Homestead Act (Carbon County Courthouse Book 6, pg. 390). Prior to 1908 the Haycock's lived in another masonry dugout (dates around 1890) at the end of Haycock Lane.

4. **OLDEST DATE:** 1908 **RECENT DATE:** Unknown
HOW DETERMINED: The homestead was probably constructed a few years prior to the 1908 patent filing date.
5. **SITE DIMENSIONS:** [50] **M by** [25] **M**
Area [981] **Sq. M**
6. **SURFACE COLLECTION/METHOD:** None
SAMPLING METHOD: N/A
7. **ESTIMATED DEPTH OF CULTURAL FILL:** Fill noted but exact depth unknown
How estimated (If tested, show location on map):
8. **EXCAVATION STATUS:** [ ] **EXCAVATED**
[ ] **TESTED**
[X] **UNEXCAVATED**

TESTING METHOD: N/A

9. **SUMMARY OF ARTIFACTS AND DEBRIS:** Truck (TK), Wagon (WA), Farm Machinery (FM), Farm Tools (FT), Stove (SP), Wire Nails (NW), Sanitary Cans (TC), Glass (GL), Ceramics (CS)
DESCRIBE: Most of the glass, ceramics, and tin cans were located in front (west side) of the structure. Both semi-automatic and fully automatic glass containers were found. The ceramic items consisted of sherds of ironstone, and all the tin cans were sanitary. Other items included a blue marble, zinc canning lid, porcelain canning lid insert and a leather harness. An upright wood stove was observed inside the structure. The machinery is scattered around the property and includes several manure spreaders and wagons. The truck is a Ford pick-up (Motel T). A number of other vehicles and farming equipment have been dumped on the property; most are out-of-period.
10. **CERAMIC ARTIFACTS:**

PASTE	GLAZE/ SLIP	DECOR-RATION	PATTERN	VESSEL FORMS (S)	#
white	white	none	none	unknown	3

ESTIMATED NUMBER OF CERAMIC TRADEMARKS: [3]
DESCRIBE: The ceramic artifacts consists of three plain white ironstone sherds.

11. **GLASS:**

#	MANUFACTURE	COLOR	FUNCTION	TRADEMARK	DECORATION
1	semi-auto	clear	alcohol	none	none
1	full auto	clear	beverage	none	none
6	unknown	clear	unknown	none	none
2	unknown	green	unknown	none	none

DESCRIBE: The semi-automatic bottle is straight brandy or wine finish and the full automatic machine item is a crown top finish.

12. **MAXIMUM DENSITY #/SQ. M (glass and ceramics):** 2 sq. meter
13. **TIN CANS:**

TYPE	OPENING	SIZE	MODIFIED	LABEL/MARK	FUNCTION
sanitary	cut around	crushed	no	no	unknown

DESCRIBE: Four sanitary crushed tin cans were observed.

IMACS SITE FORM: 42Cb1063, PART C (Cont.)

14. **LANDSCAPE AND CONSTRUCTED FEATURES (locate on site map):**
DESCRIBE:

15. **BUILDINGS AND STRUCTURES (locate on site map):**

#	MATERIAL	TYPE
1	stone/wood	Dugout

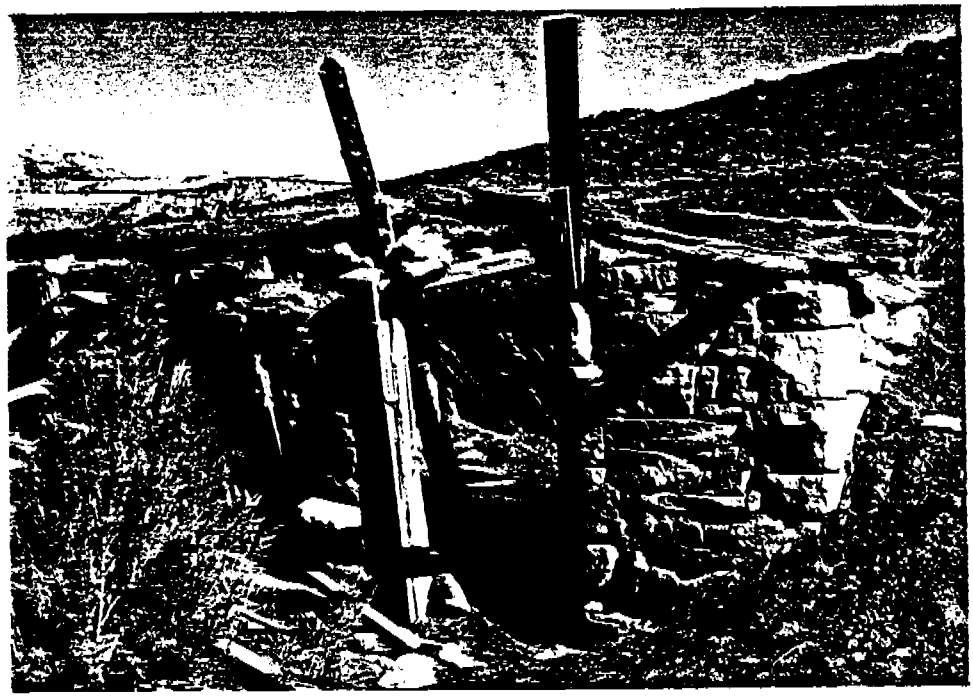
DESCRIBE: This is a one story, two room dugout which has been excavated into the west end of a low ridge. The structure is orientated northwest by southeast, and the entrances face west towards the Spring Glen Canal. The walls are constructed from well sorted and trimmed local sandstone blocks and chinked with clay. The blocks in the lower portion of the wall are larger, and the floor is earthen. Average wall thickness is 18 in. Each room has a low gable roof constructed with a central east-west orientated pinyon ridge pole overlaid by standard gauge railroad ties which function as roof joists. The railroad ties are 5 1/2 in. by 7 in. and 7 ft 9 in. long. The western portion of the roof has collapsed into the rooms. The interior south room measures 14 ft by 18 ft. The exterior wall height averages 5 ft 3 in. The height of the room near the ridge pole measures 6 ft 9 in. The ridge pole is an 8 in. axe-cut pinyon, supported by a central upright 7 in. diameter pinyon post. A number of wire nails occur in these roof supports employed for hanging items. The roof consists of closely laid railroad ties which extend from the ridge pole to the top of the exterior walls. Overlaying the railroad ties is clay soil which varies in thickness from 4 in. to 20 in. In some areas the roof has been repaired with sheets of corrugation metal, placed between the railroad ties and clay soil. The back wall is heavily sooted (note: stove is in this area); the south room appears to have been used as a smoke house. There are four metal pipes which parallel the ridge pole which were probably used for hanging meat. The door frame consists of two upright 6 in. by 6 in. timbers, measuring 5 ft 6 in. high. The casement consists of 2" by 6" and 1" by 6" boards. The door has been removed. The window is presently filled-in with sandstone blocks, but originally it measured approximately 3 ft wide by 3 ft 6 in. high, and was framed with a 2" by 4" boards.

The north room shares a common wall and has a doorway framed with 6" by 6" railroad ties. This room measures 9 ft (length) by 15 ft (wide), and has an average wall height of 5 ft 3 in. The east-west pinyon ridge pole has an 8 in. diameter and is supported by an upright 6" by 8" railroad tie, incorporated into the front wall. This ridge pole is also supported by a central upright pinyon post as well as an upright railroad tie situated near the back wall. The roof is composed of railroad ties and clay soil, similar to the south room, except, with the addition of 1" x 8" and 1" x 10" milled boards nailed to the bottom of the railroad ties. The north entrance has collapsed. There is a small window constructed from a dove jointed apple box measuring 1" by 1 ft 4 in. and 8 in. thick in the north wall. Throughout the dugout are various sized wire nails (8 p, 10p, 12p, 16p, and 20p). In front of the dugout is a pile of recently dumped wood and inspection of the area failed to locate an outhouse.

16. **COMMENTS/CONTINUATIONS:**

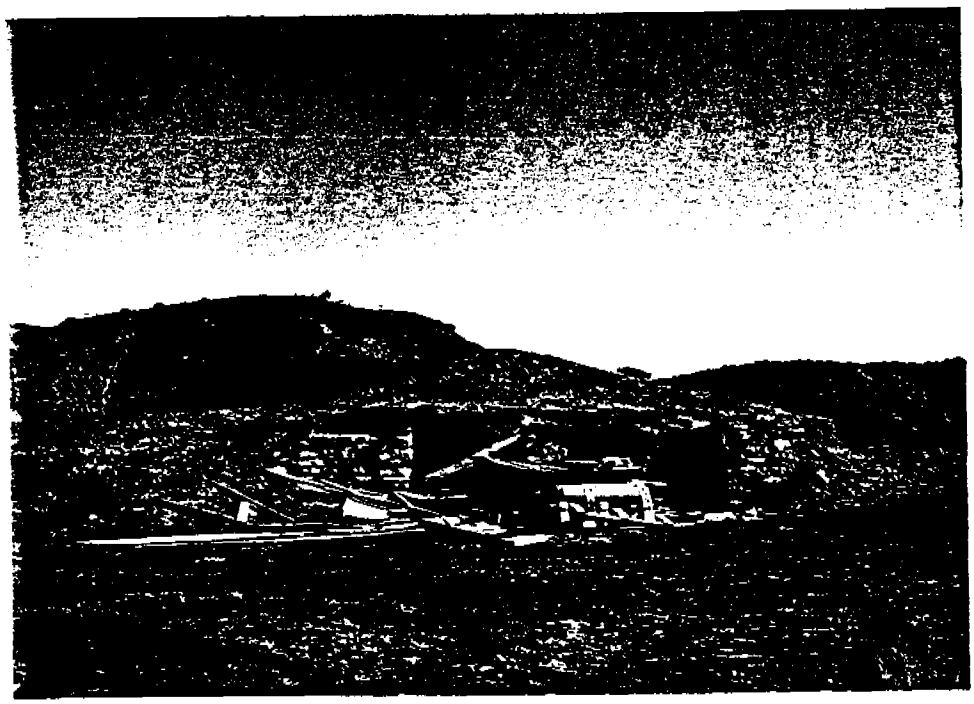
Horsley, Ernest
1984 Carbon County Journal: Price's Early Settlement. Vol 3, No. 1., Price, Utah.

42Cb1063 Photo is taken to the north showing the dugout in the foreground. Roll 536:2/16.

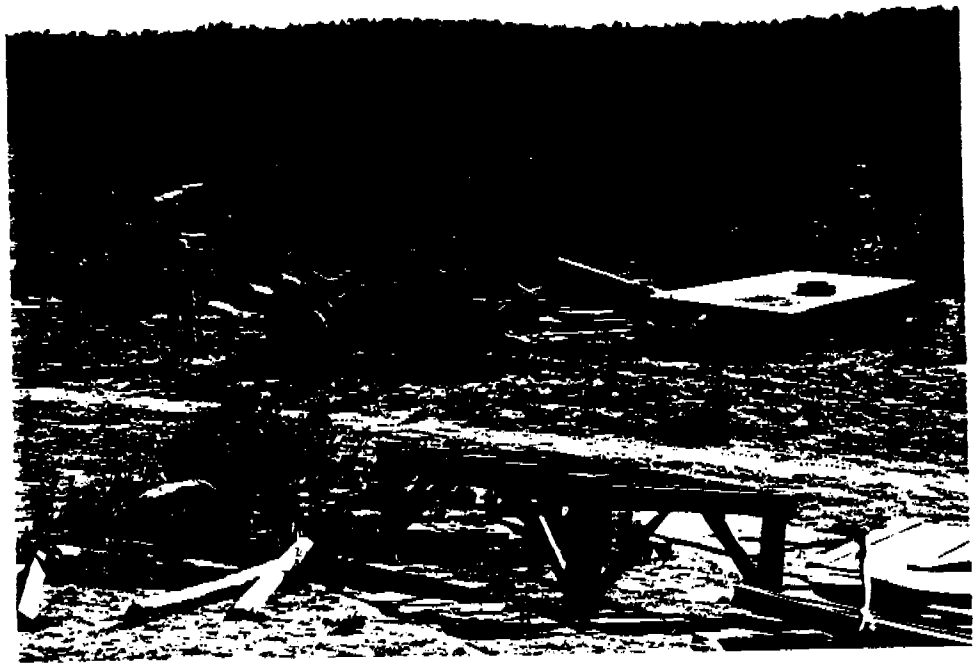


42Cb1063 Close-up of southwest entrance of the dugout, viewed to the northeast. Roll 536:2/17.

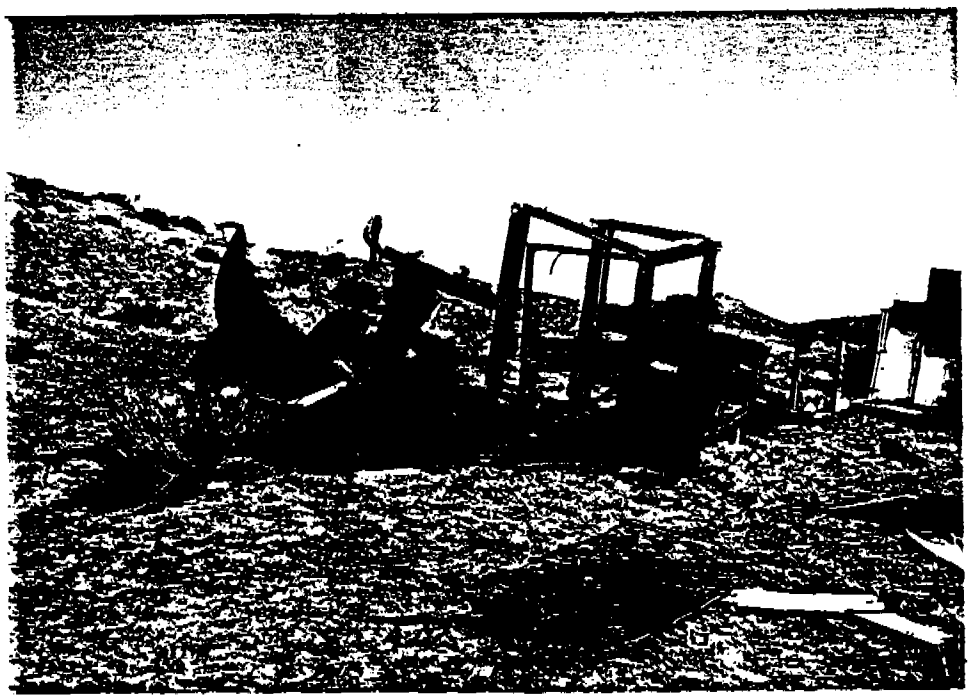
52Cb1063 Close-up of northwest entrance of the dugout, viewed to the southwest. Roll 536:2/19.



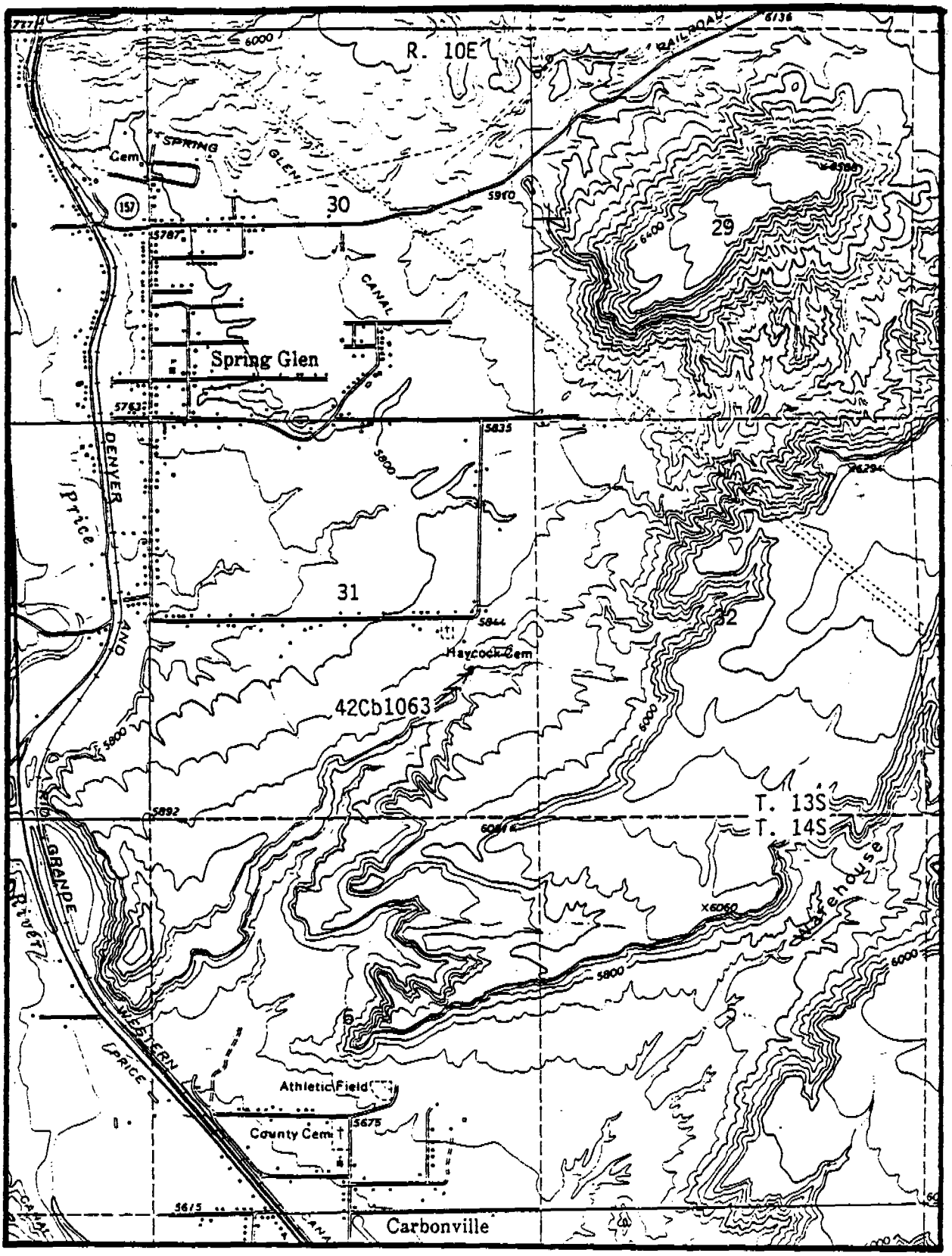
42Cb1063 Overview of dugout taken from the Spring Glen Canal and viewed to the east. Roll 536:2/21.



42Cb1063 Photo taken to the east showing archaeologist next to Manure Spreader No. 2. Roll 536:2/22.



42Cb1063 Close-up of Model T viewed to the southeast.



Site 42Cb1063. USGS Helper, UT 7.5', 1972. Scale 1:24000

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 05/27/97

API NO. ASSIGNED: 43-007-30352

WELL NAME: CHUBBUCK A-1
OPERATOR: ANADARKO PETROLEUM (N0035)

PROPOSED LOCATION:
NESE 31 - T13S - R10E
SURFACE: 2017-FSL-0676-FEL
BOTTOM: 2017-FSL-0676-FEL
CARBON COUNTY
UNDESIGNATED FIELD (002)

LEASE TYPE: FEE
LEASE NUMBER: CHUBBUCK 5

PROPOSED PRODUCING FORMATION: FRSD

INSPECT LOCATION BY: 07/15/97		
TECH REVIEW	Initials	Date
Engineering		
Geology		
Surface		

RECEIVED AND/OR REVIEWED:

- ✓ Plat
- ✓ Bond: Federal [] State [] Fee [✓]
  (Number 203521)
- N Potash (Y/N)
- N Oil shale (Y/N)
- ✓ Water permit
  (Number COMMERCIAL SUPPLY)
- N RDCC Review (Y/N)
  (Date: _____)

LOCATION AND SITING:

- ___ R649-2-3. Unit: _____
- ✓ R649-3-2. General.
- ___ R649-3-3. Exception.
- ___ Drilling Unit.
  Board Cause no: _____
  Date: _____

COMMENTS: Casing OK, cement stip. needed, BOP OK. Surf. agreement submitted. Exc. loc. ~~Sundry notice submitted~~.

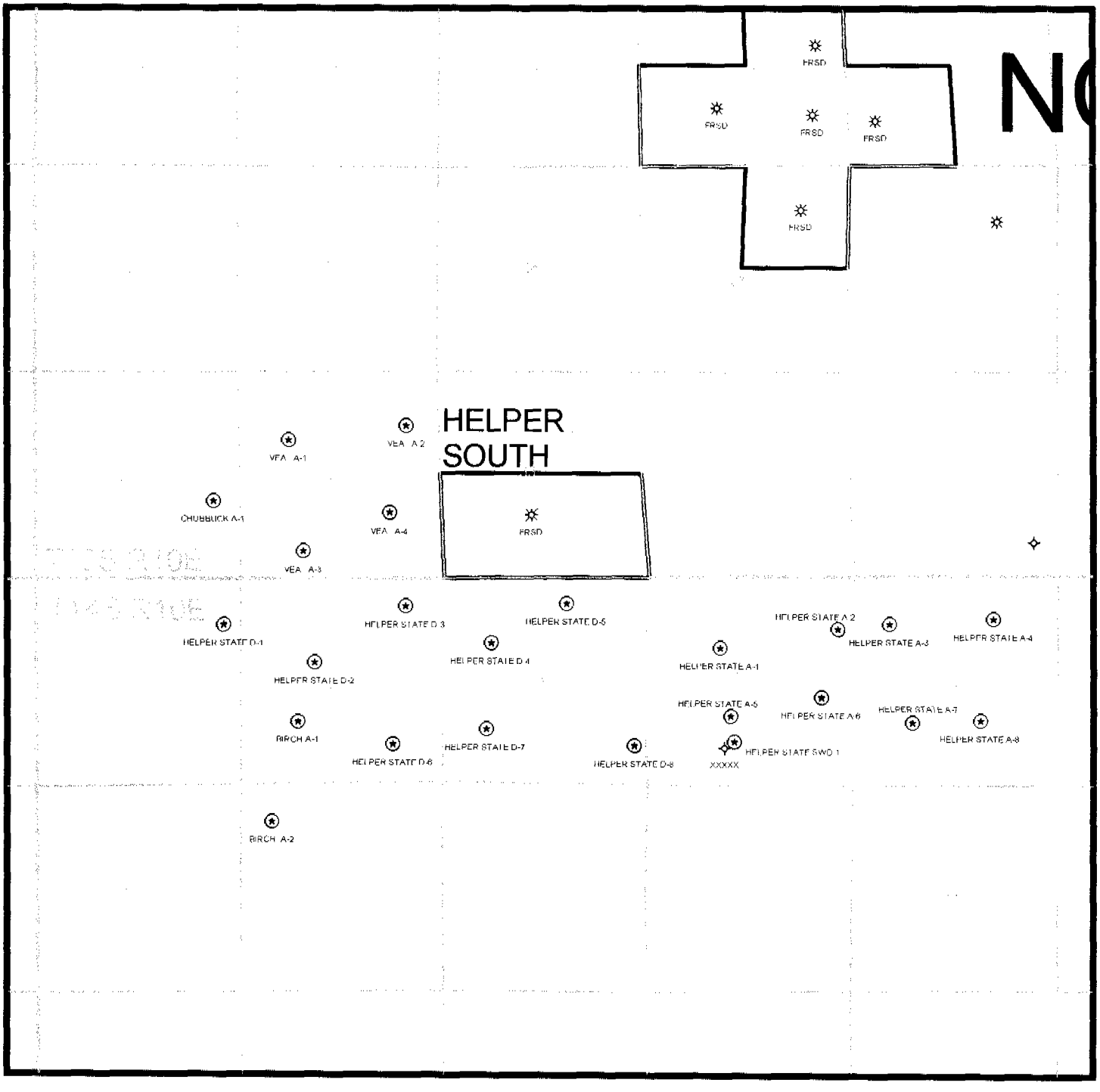
STIPULATIONS: 1. Statement of Basis
2. Cement - 5½" casing - TD to surface.

OPERATOR: ANADARKO (N0035)

FIELD: WILDCAT & UNDESIGNATED (001 & 002)

SEC, TWP, RNG: 31 & 32 T13S, R10E & 2,3,4,5,6,8, T14S, 10E

COUNTY: CARBON UAC: R649-3-2 & R649-3-3



PREPARED:
DATE: 2-JUNE-97

DIVISION OF OIL, GAS AND MINING
APPLICATION FOR PERMIT TO DRILL
STATEMENT OF BASIS

Operator Name: Anadarko Petroleum Corp

Name & Number: CHUBBUCK A-1

API Number: 43 - 007 - 30352

Location: 1/4,1/4 NESE Sec. 31 T. 13 S R. 10 E

Geology/Ground Water:

A minor aquifer may be encountered close to the surface. The location is on the fringe of a moderately permeable Quaternary slope wash deposit as it laps up onto the Blue Gate Shale Member of the Mancos Shale. These are the only sediments which may provide a high quality water resource from the surface to the top of the Ferron Sandstone Member of the Mancos Shale. The proposed 300' surface casing program will adequately cover the thin surficial deposits.

Reviewer: K. Michael Hebertson
Date: July 7, 1997

Surface:

The pre-site review was conducted by division personnel in accordance with the rules and guidelines of the Division. School Trust Lands were contacted but did not attend. Drainage and location problems were discussed with those in attendance. It was also decided that the topsoil and left over spoil piles on all locations & and the shoulders of all access roads would be reseeded in order to stabilize them and minimize erosion. The access roads and infrastructures will be graveled kept compacted to minimize dust. Division of Wildlife has suggested that all disposal pits be covered with netting and that no liquid hydrocarbons be allowed to collect in the pits. However to date no liquid hydrocarbons have been encountered in these wells.

Reviewer: John Baza & Jimmie Thompson
Date: 7/ 1 /97

Conditions of Approval/Application for Permit to Drill:

1. No drilling prior to July 15, 1997 for raptor fledging to take place.
2. Winter range restriction for deer and elk use no activity Dec. 1 - Apr. 15.
3. The spoil pile will be moved from the SE to the NE away from the drainage
4. The location will be bermed on all sides to prevent runoff.
5. The topsoil and spoil piles, shoulders of the roads, and unused portions of location will be reseeded and reclaimed as soon as practicle after completion.
7. A synthetic pit liner with a minimum thickness of 12 MILS will be required.
8. If this well is productive Anadarko will appear before the Board of Oil, Gas and Mining for spacing approval within 30 days of completion or prior to the commencement of production.

ON-SITE PREDRILL EVALUATION

Division of Oil, Gas and Mining

OPERATOR: Anadarko

WELL NAME & NUMBER: CHUB A-1

API NUMBER: 43-007-30352

LEASE: FEE (CHUBBUCK) FIELD/UNIT: Undesignated (002)

LOCATION: 1/4,1/4 NESE Sec: 31 TWP: 13 S RNG: 10 E 2017 FSL 676 FEL

LEGAL WELL SITING: 460 F SEC. LINE; 460 F 1/4,1/4 LINE; 920 F ANOTHER WELL.

GPS COORD (UTM): x = 514023 E; y = 4388671 N

SURFACE OWNER: John & Rosa Vea

PARTICIPANTS

J Baza, J. Thompson (DOGM), Jeff Duncan (Anadarko), David Kaye (Uintah Engineering), Bill Bates (DWR), Mike Barnes Nelson Construction

REGIONAL/LOCAL SETTING & TOPOGRAPHY

Western margin of Colorado Plateau/~4 miles south of the Tavaputs Plateau and 4 miles South of the 1000-1500' Book Cliffs. Location is on the pediment mantle which is Quaternary in age. Shallow canyons (1-200' deep) incise the pediment forming benches north and east of Price, UT, below the Book Cliffs. Pediment gently slopes south. Location is on Pediment mantle the ground is almost flat. This location lies in an open South of Spring Glenn & Northwest of Warehouse Canyon.

SURFACE USE PLAN

CURRENT SURFACE USE: Grazing,

PROPOSED SURFACE DISTURBANCE: 270' X 180' pad with 130' X 50' X 10' pit included as part of the location. 4.3 miles of approach road and upgrades needed. Spoils and topsoil stockpiles and reserve pit backfill pile will be stored outboard of the pad. About 4.3 miles of new access road will be required.

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: Helper Federal B-1

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: Powerline and gathering system are proposed to transverse the cliff face at the Helper State D-3 location in Warehouse Canyon.

SOURCE OF CONSTRUCTION MATERIAL: Native material will be used to gravel approach road and location. Any additional material will be acquired from a commercial sources.

ANCILLARY FACILITIES: None

WASTE MANAGEMENT PLAN:

Portable toilets; garbage cans on location will be emptied into centralized dumpsters which will be emptied into an approved landfill. Reserve pit will be dried after use and then buried. Water produced during testing and completion will be stored in a lined temporary reserve pit and disposed in an approved disposal facility.

ENVIRONMENTAL PARAMETERS

AFFECTED FLOODPLAINS AND/OR WETLANDS: The NW arm of Warehouse Canyon is 0.75 miles south. Price River is 2.50 miles south. State Division of Water Rights personnel have been contacted and included in the planning to clear areas for compliance with 404 Dredge and Fill Permit requirements. No permits are required.

FLORA/FAUNA: Sagebrush, indian rice grass, broom snakeweed, winterfat, greasewood, shadscale, blue gramma, dryland sedge, salina wild rye, cactus, Pinion and Juniper, / birds, coyotes, rodents, elk, deer, reptiles.

SOIL TYPE AND CHARACTERISTICS: Mostly clay with Sand, & cobble, inclusions modrately-permeable soil on the Blue Gate Shale Member of the Cretaceous age Mancos Shale.

SURFACE FORMATION & CHARACTERISTICS: Blue Gate Shale. Light brown, brown, gray, or buff, some unconsolidated, massively bedded outwash sediments consisting of silts, sands, pebbles, boulders, and cobbles in a poorly sorted mixture.

EROSION/SEDIMENTATION/STABILITY: Stable ground with no undermining, evident locally. Erosion is limited to minor dry washes during cloudbursts, high winds and periods of rapid snowmelt with sedimentation occuring during the wane of these episodes.

PALEONTOLOGICAL POTENTIAL: None

RESERVE PIT

CHARACTERISTICS: 130' X 50' X 10' excavated pit bermed to deflect runoff.

LINER REQUIREMENTS (Site Ranking Form attached): Minimum 12 mil synthetic liner

SURFACE RESTORATION/RECLAMATION PLAN

Site will be restored to landowner standards upon abandonment.

SURFACE AGREEMENT: Landowner and surface agreement on file.

CULTURAL RESOURCES/ARCHAEOLOGY: Cleared and on-file.

OTHER OBSERVATIONS/COMMENTS

Items discussed included: 1)Location of power lines and gathering system. 2)Need for consultation with affected municipalities. 3)Reclamation of unnecessary road segments of existing two-track jeep trails created by more directly accessing location. 4)Minimizing access routes to more direct approaches. 5)Startups after July 15, 1997 as per DWR. 6)Drilling restrictions after December 1, 1997 as per DWR. 9)Investigate the use of existing access roads.

ATTACHMENTS:

photos were taken of this site.

John Baza & Jimmie Thompson	July 1, 1997, 9:00 AM
DOGM REPRESENTATIVES	DATE/TIME

Evaluation Ranking Criteria and Ranking Score
For Reserve and Onsite Pit Liner Requirements

Site-Specific Factors	Ranking	Site Ranking
Distance to Groundwater (feet)		
>200	0	
100 to 200	5	
75 to 100	10	
25 to 75	15	
<25 or recharge area	20	5
Distance to Surf. Water (feet)		
>1000	0	
300 to 1000	2	
200 to 300	10	
100 to 200	15	
< 100	20	
Distance to Nearest Municipal Well (feet)		
>5280	0	
1320 to 5280	5	
500 to 1320	10	
<500	15	
Distance to Other Wells (feet)		
>1320	0	
300 to 1320	10	
<300	20	10
Native Soil Type		
Low permeability	0	
Mod. permeability	10	
High permeability	20	10
Fluid Type		
Air/mist	0	
Fresh Water	5	
TDS >5000 and <10000	15	
TDS >10000 or Oil Base	20	
Mud Fluid containing high levels of hazardous constituents		
Drill Cuttings		
Normal Rock	0	
Salt or detrimental	10	
Annual Precipitation (inches)		
<10	0	
10 to 20	5	
>20	10	5
Affected Populations		
<10	0	
10 to 30	6	
30 to 50	8	
>50	10	
Presence of Nearby Utility Conduits		
Not Present	0	
Unknown	10	
Present	15	
Final Score		30

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

March 24, 1998

Anadarko Petroleum Corporation
17001 Northchase Drive
Houston, Texas 77060

Re: Chubbuck A-1 Well, 2017' FSL, 676' FEL, NE SE, Sec. 31, T. 13 S., R. 10 E., Carbon County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-007-30352.

Sincerely,

John R. Baza
Associate Director

lwp
Enclosures
cc: Carbon County Assessor
Bureau of Land Management, Moab District Office

Operator: Anadarko Petroleum Corporation

Well Name & Number: Chubbuck A-1

API Number: 43-007-30352

Lease: Fee

Location: NE SE **Sec.** 31 **T.** 13 S. **R.** 10 E.

Conditions of Approval

1. General
   Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for Permit to Drill.

2. Notification Requirements
   Notify the Division within 24 hours following spudding the well or commencing drilling operations. Contact Jim Thompson at (801)538-5336.

   Notify the Division prior to commencing operations to plug and abandon the well. Contact Dan Jarvis at (801) 538-5338 or John R. Baza at (801)538-5334.

3. Reporting Requirements
   All required reports, forms and submittals shall be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis dated July 7, 1997 (copy attached).

5. The cement volumes for the 5½" casing shall be determined from actual hole conditions and the setting depth of the casing in order to place cement from the pipe setting depth back to the surface.

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE RESOURCES

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
John Kimball
Division Director

Southeastern Region
475 West Price River Drive, Suite C
Price, Utah 84501-2860
801-636-0260
801-637-7361 (Fax)

April 20, 1998

Steve Ruhl
Anadarko
P.O. Box 1330
Houston, TX 77251-1330

Steve:

We have reviewed the proposed Chubbuck A-1 drill site that you faxed to us on April 7, 1998. We have reviewed our records and agree with your map that the drill site is outside of any of the known raptor locations. Since the well is outside the ½ mile buffer, there is no need for a seasonal closure on drilling until July 20th. The road that accesses this site from the east does pass through the buffer zone for a golden eagle nest that was tended last year. We believe the eagle that tended this nest, raised young a short distance east of the tended nest. It is possible that the eagle may choose the site within ½ mile of the road this year. Possible impacts to the site can be avoided by accessing Chubbuck A-1 from the west with heavy equipment as much as possible until after July 20.

The raptor locations on the map that you sent us are not at the proper locations. While the error in this instance is not enough to significantly change the analysis of impact, future projects could be affected. I am including a copy of the 1997 raptor survey in the area for your convenience. Confusion in determining locations can also be avoided by standardizing the type of map used. We use USGS 1:24,000, 7.5 quadrangle, black and white maps that we download from the Internet. The address for these maps is located at: http//:nrwrtl.nr.state.ut.us/arcinfo/quadold.html. The maps produced for your company by Uintah Engineering and Land Surveying are also close enough to the ones we use to avoid confusion.

We appreciate the opportunity to review this drill site. If you have any questions please call me at 435-636-0279.

Sincerely,

Ben Morris

Ben Morris
Habitat Biologist

Copy: Brad Hill
Enclosure: 2

MINE:CHUBBOCK.RWV

CONFIDENTIAL

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: ANADARKO PETROLEUM CORP.

Well Name: CHUBBUCK A-1

Api No. 43-007-30352

Section 31 Township 13S Range 10E County CARBON

Drilling Contractor MOLEN

Rig #____

SPUDDED:

Date 5/13/98

Time_____

How DRY HOLE

Drilling will commence_____

Reported by JIM

Telephone # 1-435-637-3044-MOBILE 1-435-636-5218

Date: 5/11/98 Signed: JLT

FORM 9

STATE OF UTAH

DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial Number: Chubbuck 95

6. If Indian, Allottee or Tribe Name:

7. Unit Agreement Name:

8. Well Name and Number: Chubbuck A-1

9. API Well Number: 43-007-30352

10. Field and Pool, or Wildcat: Helper CBM

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells. Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

1. Type of Well: OIL ☐ GAS ☐ OTHER: Coalbed Methane

2. Name of Operator: Anadarko Petroleum Corporation

3. Address and Telephone Number: 17001 Northchase Drive, Houston, TX 77060 281-875-1101

4. Location of Well
Footages: 2017' FSL & 676 FEL, SE/4
QQ, Sec., T., R., M.: Sec 31-T13S-R10E
County: Carbon
State: Utah

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT (Submit in Duplicate)		SUBSEQUENT REPORT (Submit Original Form Only)	
☐ Abandonment	☐ New Construction	☐ Abandonment *	☐ New Construction
☐ Casing Repair	☐ Pull or Alter Casing	☐ Casing Repair	☐ Pull or Alter Casing
☐ Change of Plans	☐ Recompletion	☐ Change of Plans	☐ Shoot or Acidize
☐ Conversion to Injection	☐ Shoot or Acidize	☐ Conversion to Injection	☐ Vent or Flare
☐ Fracture Treat	☐ Vent or Flare	☐ Fracture Treat	☐ Water Shut-Off
☐ Multiple Completion	☐ Water Shut-Off	☐ Other _____	
☐ Other Spud Notification @ 0700 Hrs on 06/05/98			

Approximate date work will start _____

Date of work completion _____

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.

* Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

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JUN 26 1998
DIV. OF OIL, GAS & MINING

13. Name & Signature: Dave Hudspeth Title: Staff Drilling Engineer Date: 6/16/98

(This space for State use only)

(1/93) (See Instructions on Reverse Side)

ANADARKO PETROLEUM CORPORATION
WELL HISTORY
ONSHORE - U.S.

CHUBBUCK "A" 1, HELPER-PRICE, 2017 FSL & 676 FEL, SEC 31-T13S-R10E, CARBON COUNTY,UT., APC WI 1.0000, NRI 0.875000, AFE 17270 (LOC #116914), ETD 3200', GLE – 5875' (FERRON COAL), MOLEN RIG #1, API #43-007-30352.

06/04/98 MIRU, P/U BHA, PREPARE TO SPUD TODAY

06/05/98 **SPUD WELL @ 0700 HRS 05 JUNE 98,** DRLG F/ 326'-1543', LAST SURVEY @ 1041 – 1.5°, MW AIR, CC 35,000. RPT #1

06/06/98 DRLG F/ 1543' - 3080' (TD), BLOW HOLE CLEAN-POOH, R/U COMPUTALOG, LOG WELL, LAST SURVEY @ 3038 – 3.0°, MW AIR, CC 50,000. RPT #2

06/07/98 FINISH LOGGING, R/D LOGGERS, TIH W/ BIT-BLOW HOLE DRY, POOH, LDDP/DC, RIH W/ 74 JTS 17# N80 5 ½" CSG TO BTM, CMT SAME W/ 130 SX CMT, N/D BOPE-SET SLIPS, CUT CSG-INSTALL TBG HEAD, R/D RIG, LAST SURVEY @ 3038 – 3.0°, MW AIR, CC 137,000. RPT #3

06/08/98 **RELEASE RIG @ 2200 HRS 08 JUNE 98**, LAST SURVEY @ 3038 – 3.0°, CC 137,000. RPT #4 – ***TEMP DROP FROM REPORT-***

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM - FORM 6

OPERATOR Anadarko Petroleum Corporation

ADDRESS 17001 Northchase Drive
Houston, Texas 77060

OPERATOR ACCT. NO. N -0035

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION QQ	SC	TP	RG	COUNTY	SPUD DATE	EFFECTIVE DATE
A	99999	12397	43-007-30352	Chubbuck A-1	SE	31	13S	10E	Carbon	06/05/98	06/05/98

WELL 1 COMMENTS:
New Single Well Entity added 6-30-98. fec CONFIDENTIAL

WELL 2 COMMENTS:

WELL 3 COMMENTS:

WELL 4 COMMENTS:

WELL 5 COMMENTS:

ACTION CODES (See instructions on back of form)
- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

(3/89)

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JUN 25 1998
DIV. OF OIL, GAS & MINING

Signature

Staff Drlg. Engineer 06/16/98
Title Date

Phone No. (281) 874-8814

ANADARKO PETROLEUM CORPORATION 17001 NORTHCHASE DRIVE • P.O. BOX 1330 • HOUSTON, TEXAS 77251-1330
TEL. (281) 875-1101

Anadarko

September 23, 1998

Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84414-5801

Re: Well Completion Reports (Form 8)
Chubbuck A-1
Helper Field
Carbon County, Utah

Gentlemen:

Please find enclosed, in triplicate, Well Completion Report (Form 8) and a wellbore diagram for the referenced well.

Should you require any additional information, please contact me at (281) 873-1276.

Best regards,

ANADARKO PETROLEUM CORPORATION

Gail A. Rupert
Engineering Technician

Enclosures

cc: Bureau of Land Management
Moab District Office
P.O. Box 970
Moab, Utah 84532

Bureau of Land Management
Price River Resources Area
900 North, 700 East
Price, Utah 84501

GAR
TRC – well files
SMF

FORM 8

STATE OF UTAH

DIVISION OF OIL, GAS AND MINING

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NO.: CHUBBUCK 95

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other COALBED METHANE

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: CHUBBUCK

2. NAME OF OPERATOR: Anadarko Petroleum Corporation

9. WELL NO.: A-1

3. ADDRESS OF OPERATOR: 17001 Northchase Dr., Houston, Texas 77060

10. FIELD AND POOL, OR WILDCAT: HELPER CBM

4. LOCATION OF WELL *(Report location clearly and in accordance with any State requirements.)*
At surface: 2017' FSL & 676' FEL, NE SE
At top prod. interval reported below: SAME
At total depth: SAME

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11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC. 31, T13S, R10E

14. API NO.	DATE ISSUED	12. COUNTY	13. STATE
43-007-30352	3/24/98	CARBON	UTAH

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod. or Plug & Abd.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)	19. ELEV. CASINGHEAD
6/5/98	6/6/98	8/18/98	5878' GL & 5887' KB	5878' GL

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
3080' TD	2994' PBTD	N/A	→	X	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD): FERRON COAL - 2625' - 2720' OA

25. WAS DIRECTIONAL SURVEY MADE: NO

26. TYPE ELECTRIC AND OTHER LOGS RUN: CBL/GR/CALP/PEF/DRHO/DP/SMP

27. Was Well Cored YES ☐ NO ☒ *(Submit analysis)*
Drill System Test YES ☐ NO ☒ *(See reverse side)*

28. CASING RECORD *(Report all strings set in well)*

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8"	24	328'	12-1/4"	110 SX	
5-1/2"	17	3080'	7-7/8"	130 SX	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-3/8"	2750'	

31. PERFORATION RECORD *(Interval, size and number)*
2625'-2628' (6)
2637'-2639' (6)
2652'-2654' (12)
2687'-2689' (12)
2694'-2696' (12)
2703'-2705' (12)
2718'-2720' (12)

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SEP 28 1998
DIV. OF OIL, GAS & MINING

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
2687'-2720'	FRAC W/33500# 20/40 SD & 58200#
	12/20 SD
2625'-2654'	FRAC W/30K# 20/40 SD & 22500#
	12/20 SD - 149 GAL FLUSH

33. PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD *(Flowing, gas lift, pumping - size and type of pump)*	WELL STATUS *(Producing or shut-in)*
8/18/98	PUMPING - ROD PUMP 2"x1-1/2"x16'	PRODUCING

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL - BBL.	GAS - MCF.	WATER - BBL.	GAS - OIL RATIO
8/18/98	24			0	53	31	N/A

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL - BBL.	GAS - MCF.	WATER - BBL.	OIL GRAVITY - API (CORR.)
N/A	100		0	53	31	N/A

34. DISPOSITION OF GAS *(Sold, used for fuel, vented, etc.)*: SOLD - QUESTAR

TEST WITNESSED BY: JIM HARTLEY, ANADARKO

35. LIST OF ATTACHMENTS

CONFIDENTIAL PERIOD EXPIRED ON 9-18-99

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED [signature] TITLE SHAD M. FRAZIER ENGINEER DATE 9/22/98

See Spaces for Additional Data on Reverse Side

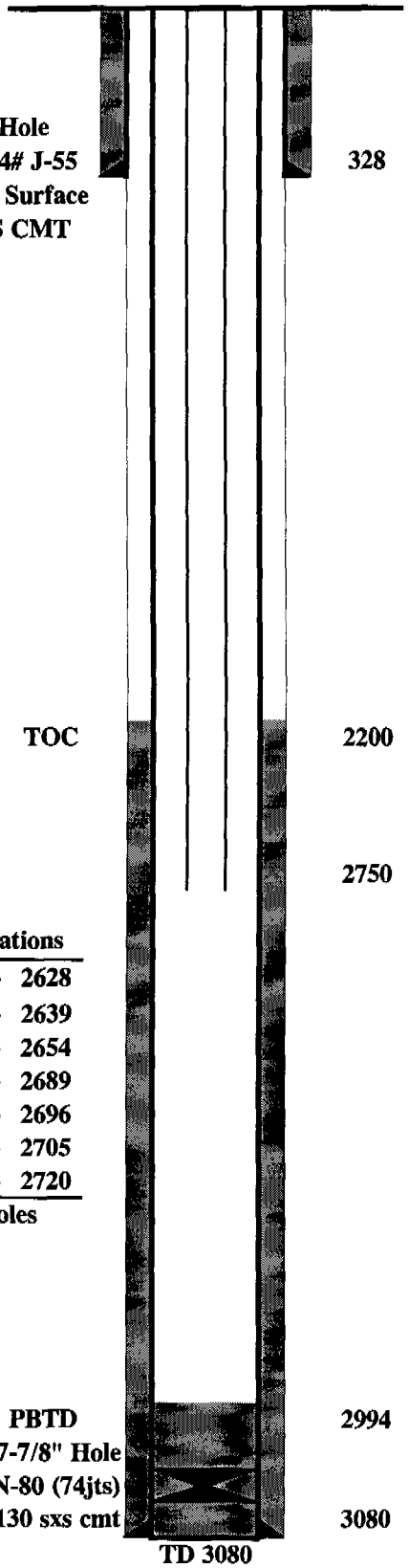
Chubbock A-1

2017' FNL & 676' FEL, SEC 31-T13S-R10E

API: 43-007-30352

	SPUD	RIG OFF
SURFACE	6/5/98	6/8/98
PRODUCTION		

WI% 100% NRI% 87.50000%



(Holes)	Perforations
(6)	2625 - 2628
(6)	2637 - 2639
(12)	2652 - 2654
(12)	2687 - 2689
(12)	2694 - 2696
(12)	2703 - 2705
(12)	2718 - 2720
(72)	Total Holes

WELL WORK HISTORY

NOTES:

TUBING BREAKDOWN		
2-3/8"		JTS
TA		
2-3/8"		JTS
SN		
2-3/8"		JTS
NC		
EOT		

ROD BREAKDOWN	
PONIES	
1"	
7/8"	
3/4"	
1"	
1.5"	
PUMP	

DEVIATION ANGLE		FORMATION	TOP	KB	5887
1041	1.5	FERRON SS	2595		3292
3038	3	FERRON COAL	2613		3274
		TUNUNK SHALE	2820		3067
		Gross Coal	30		

LAST REVISED: 9/23/98

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155

IN REPLY REFER TO
UT-931

February 22, 1999

Anadarko Petroleum Corporation
P.O. Box 1330
Houston, Texas 77251-1330

Gentlemen:

Enclosed is one approved copy of Communitization Agreement No. UTU77384. This agreement communitizes all rights as to natural gas and associated liquid hydrocarbons producible from the Ferron Formation, covering the SE¼ of Section 31, Township 13 South, Range 10 East, SLB&M, Carbon County, Utah. This agreement conforms with the spacing set forth in Order No. 241-2 which was issued by the State of Utah, Board of Oil, Gas and Mining on June 17, 1998.

This agreement is effective as of August 18, 1998. The communitized area covers 160.329 acres and includes portions of Federal oil and gas lease UTU71392.

Approval of this agreement does not warrant or certify that the operator thereof and other holders of operating rights hold legal or equitable title to those rights in the subject leases which are committed hereto.

Minerals Management Service Form MMS-3160, "Monthly Report of Operations", must be submitted for this agreement beginning with the month in which drilling operations commence for Well No.A-1, NE¼ SE¼, Section 31, Township 13 South, Range 10 East, SLB&M, Carbon County, Utah, API # 43-007-30252, on a Patented Lease. Form MMS-3160 is to be mailed to the Minerals Management Service, Production Accounting Division, P. O. Box 17110, Denver, Colorado 80217.

Since this well is producing, this approval requires the submission of a Payor Information Form MMS-4025 to the Minerals Management Service (MMS) within 30 days (30 CFR 210.51). Please notify the designated payor or payors (purchasers, working interest owners, or others) as soon as possible regarding this requirement. Any production royalties that are due must be reported and paid within 90 days of the Bureau of Land Management's approval date or the payors will be assessed interest for late payment under the Federal Oil and Gas Royalty Management Act of 1982 (See 30 CFR 218.54). If you need assistance or clarification, please contact the Minerals Management Service at 1-800-525-9167 or 303-231-3504.

Please furnish all interested principals with necessary evidence of this approval.

Sincerely,

/s/ Robert A. Henricks

Robert A. Henricks
Chief, Branch of Fluid Minerals

Enclosure

bcc: Mineral Adjudication Group w/enclosure
District Manager - Moab w/enclosure
SITLA
Division Oil, Gas & Mining
File - UTU77384
MMS - Data Management Division
Agr. Sec. Chron.
Fluid Chron.

UT931:TATHOMPSON:tt:2/22/99

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET (for state use only)

ROUTING
CDW

X - Change of Operator (Well Sold) Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective: **4/1/2013**

FROM: (Old Operator):	**TO:** (New Operator):
N0035-Anadarko Petroleum Corporation	N3940- Anadarko E&P Onshore LLC
PO Box 173779	PO Box 173779
Denver, CO, 80214	Denver, CO 802014
Phone: 1 (720) 929-6000	Phone: 1 (720) 929-6000

CA No. **Unit:**

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
See Attached List								

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 4/9/2013
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 4/9/2013
3. The new company was checked on the **Department of Commerce, Division of Corporations Database on:** 4/10/2013
4a. Is the new operator registered in the State of Utah: _____ Business Number: 593715-0161
5a. (R649-9-2)Waste Management Plan has been received on: Yes
5b. Inspections of LA PA state/fee well sites complete on: 4/10/2013
5c. Reports current for Production/Disposition & Sundries on: 4/10/2013
6. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM 4/2/2013 BIA N/A
7. **Federal and Indian Units:**
   The BLM or BIA has approved the successor of unit operator for wells listed on: N/A
8. **Federal and Indian Communization Agreements ("CA"):**
   The BLM or BIA has approved the operator for all wells listed within a CA on: N/A
9. **Underground Injection Control ("UIC")** Division has approved UIC Form 5 Transfer of Authority to **Inject,** for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 4/10/2013

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 4/11/2013
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 4/11/2013
3. Bond information entered in RBDMS on: 4/10/2013
4. Fee/State wells attached to bond in RBDMS on: 4/11/2013
5. Injection Projects to new operator in RBDMS on: 4/11/2013
6. Receipt of Acceptance of Drilling Procedures for APD/New on: N/A

BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: WYB000291
2. Indian well(s) covered by Bond Number: N/A
3a. (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number 22013542
3b. The **FORMER** operator has requested a release of liability from their bond on: N/A

LEASE INTEREST OWNER NOTIFICATION:

4. (R649-2-10) The **NEW** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: 4/11/2013

COMMENTS:

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER: See Wells

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER CBM Wells

8. WELL NAME and NUMBER:

2. NAME OF OPERATOR: Anadarko Petroleum Corporation

9. API NUMBER: See Wells

3. ADDRESS OF OPERATOR: P.O. Box 173779 CITY Denver STATE CO ZIP 80217

PHONE NUMBER: (720) 929-6000

10. FIELD AND POOL, OR WILDCAT:

4. LOCATION OF WELL

FOOTAGES AT SURFACE:

COUNTY:

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 4/8/2013	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☑ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The operator is requesting authorization to transfer the wells from Anadarko Petroleum Corporation and Anadarko Production Company to Anadarko E&P Onshore, LLC. Please see the attached list of 181 wells that are currently filed under Anadarko Petroleum Corporation and Anadarko Production Company. The state/fee wells will be under bond number 22013542, and the federal wells will be under bond number WYB000291.

RECEIVED

Effective 4/1/13

APR 09 2013

Please contact the undersigned if there are any questions.

DIV. OF OIL, GAS & MINING

Jaime Scharnowske
Regulatory Analyst

Anadarko Petroleum Corporation N0035
P.O. Box 173779
Denver, CO 80214
(720) 929-6000

Jaime Scharnowske
Regulatory Analyst

Anadarko E&P Onshore, LLC N3940
P.O. Box 173779
Denver, CO 80214
(720) 929-6000

NAME (PLEASE PRINT) Jaime Scharnowske TITLE Regulatory Analyst

SIGNATURE Jaime Scharnowske DATE 4/8/2013

(This space for State use only)

APPROVED

APR 11 2013

DIV. OIL GAS & MINING

Rachel Medina

(5/2000) (See Instructions on Reverse Side)

Anadarko Petroleum Corporation (N0035) to Anadarko E&P Onshore, LLC (N3940)
Effective 1 April-2013

Well Name	Sec	Twnshp	Range	API	Entity No.	Lease Type	Well Type	Well status
HELPER ST SWD 1	03	140S	100E	4300730361	12258	State	WD	A
FED F-2 SWD	08	140S	100E	4300730555	12557	Federal	WD	A
CLAWSON SPRING ST SWD 4	13	160S	080E	4301530477	12979	State	WD	A
CLAWSON SPRING ST SWD 1	36	150S	080E	4300730721	12832	State	WD	I
HELPER FED B-1	33	130S	100E	4300730189	11537	Federal	GW	P
HELPER FED A-1	23	130S	100E	4300730190	11517	Federal	GW	P
HELPER FED A-3	22	130S	100E	4300730213	11700	Federal	GW	P
HELPER FED C-1	22	130S	100E	4300730214	11702	Federal	GW	P
HELPER FED B-5	27	130S	100E	4300730215	11701	Federal	GW	P
HELPER FED A-2	22	130S	100E	4300730216	11699	Federal	GW	P
HELPER FED D-1	26	130S	100E	4300730286	12061	Federal	GW	P
BIRCH A-1	05	140S	100E	4300730348	12120	Fee	GW	P
HELPER ST A-1	03	140S	100E	4300730349	12122	State	GW	P
HELPER ST D-7	04	140S	100E	4300730350	12121	State	GW	P
CHUBBUCK A-1	31	130S	100E	4300730352	12397	Fee	GW	P
VEA A-1	32	130S	100E	4300730353	12381	Fee	GW	P
VEA A-2	32	130S	100E	4300730354	12483	Fee	GW	P
VEA A-3	32	130S	100E	4300730355	12398	Fee	GW	P
VEA A-4	32	130S	100E	4300730356	12482	Fee	GW	P
HELPER ST A-8	02	140S	100E	4300730357	12257	State	GW	P
HELPER ST A-3	02	140S	100E	4300730358	12254	State	GW	P
HELPER ST A-4	02	140S	100E	4300730359	12255	State	GW	P
HELPER ST A-7	02	140S	100E	4300730360	12256	State	GW	P
HELPER ST A-2	03	140S	100E	4300730362	12232	State	GW	P
HELPER ST A-5	03	140S	100E	4300730363	12231	State	GW	P
HELPER ST A-6	03	140S	100E	4300730364	12233	State	GW	P
HELPER ST D-4	04	140S	100E	4300730365	12228	State	GW	P
HELPER ST D-3	05	140S	100E	4300730366	12184	State	GW	P
HELPER ST D-5	04	140S	100E	4300730367	12226	State	GW	P
HELPER ST D-8	04	140S	100E	4300730368	12229	State	GW	P
HELPER ST D-2	05	140S	100E	4300730369	12481	State	GW	P
HELPER ST D-6	05	140S	100E	4300730370	12234	State	GW	P
HELPER ST D-1	06	140S	100E	4300730371	12399	State	GW	P
BIRCH A-2	08	140S	100E	4300730372	12189	Fee	GW	P
HELPER ST A-9	10	140S	100E	4300730373	12230	State	GW	P
HELPER ST B-1	09	140S	100E	4300730376	12227	State	GW	P
HELPER FED F-3	08	140S	100E	4300730378	12252	Federal	GW	P
HELPER FED F-4	09	140S	100E	4300730379	12253	Federal	GW	P
HELPER ST A-10	10	140S	100E	4300730433	12488	State	GW	P
HELPER ST A-11	11	140S	100E	4300730434	12487	State	GW	P
HELPER ST A-12	10	140S	100E	4300730435	12486	State	GW	P
HELPER ST A-13	10	140S	100E	4300730436	12485	State	GW	P
HELPER ST B-2	09	140S	100E	4300730437	12484	State	GW	P
HELPER FED E-7	19	130S	100E	4300730508	13623	Federal	GW	P
HELPER FED B-2	33	130S	100E	4300730530	12619	Federal	GW	P
HELPER FED B-3	33	130S	100E	4300730531	12622	Federal	GW	P
HELPER FED B-4	33	130S	100E	4300730532	12623	Federal	GW	P
HELPER FED B-6	27	130S	100E	4300730533	12644	Federal	GW	P
HELPER FED B-7	27	130S	100E	4300730534	12645	Federal	GW	P
HELPER FED B-8	27	130S	100E	4300730535	12631	Federal	GW	P

Anadarko Petroleum Corporation (N0035) to Anadarko E&P Onshore, LLC (N3940)
Effective1-April-2013

Well Name	Sec	Twnshp	Range	API	Entity No.	Lease Type	Well Type	Well status
HELPER FED B-9	34	130S	100E	4300730536	12646	Federal	GW	P
HELPER FED B-10	34	130S	100E	4300730537	12626	Federal	GW	P
HELPER FED B-11	34	130S	100E	4300730538	12628	Federal	GW	P
HELPER FED B-12	34	130S	100E	4300730539	12627	Federal	GW	P
HELPER FED B-13	28	130S	100E	4300730540	12621	Federal	GW	P
HELPER FED B-14	28	130S	100E	4300730541	12620	Federal	GW	P
HELPER FED D-2	26	130S	100E	4300730542	12650	Federal	GW	P
HELPER FED D-3	26	130S	100E	4300730543	12634	Federal	GW	P
HELPER FED D-4	35	130S	100E	4300730544	12625	Federal	GW	P
HELPER FED D-5	35	130S	100E	4300730545	12637	Federal	GW	P
HELPER FED D-6	35	130S	100E	4300730546	12635	Federal	GW	P
HELPER FED E-1	29	130S	100E	4300730547	13246	Federal	GW	P
HELPER FED E-2	29	130S	100E	4300730548	12636	Federal	GW	P
HELPER FED H-1	01	140S	100E	4300730549	12653	Federal	GW	P
HELPER FED H-2	01	140S	100E	4300730550	12647	Federal	GW	P
OLIVETO FED A-2	08	140S	100E	4300730556	12630	Federal	GW	P
HELPER FED F-1	08	140S	100E	4300730557	12629	Federal	GW	P
SMITH FED A-1	09	140S	100E	4300730558	13004	Federal	GW	P
SE INVESTMENTS A-1	06	140S	100E	4300730570	12624	Fee	GW	P
HELPER ST A-14	11	140S	100E	4300730571	12612	State	GW	P
HELPER ST A-15	11	140S	100E	4300730572	12613	State	GW	P
HELPER ST E-1	36	130S	100E	4300730573	12615	State	GW	P
HELPER ST E-2	36	130S	100E	4300730574	12614	State	GW	P
HARMOND A-1	07	140S	100E	4300730586	12616	Fee	GW	P
HELPER ST E-3	36	130S	100E	4300730592	12868	State	GW	P
HELPER FED A-6	23	130S	100E	4300730593	12649	Federal	GW	P
HELPER FED D-7	26	130S	100E	4300730594	12651	Federal	GW	P
HELPER FED D-8	35	130S	100E	4300730595	12652	Federal	GW	P
CLAWSON SPRING ST A-1	36	150S	080E	4300730597	12618	State	GW	P
HELPER ST E-4	36	130S	100E	4300730598	12825	State	GW	P
HELPER ST A-16	11	140S	100E	4300730603	12638	State	GW	P
CHUBBUCK A-2	06	140S	100E	4300730604	12648	Fee	GW	P
CLAWSON SPRING ST A-2	36	150S	080E	4300730635	12856	State	GW	P
CLAWSON SPRING ST A-3	36	150S	080E	4300730636	13001	State	GW	P
CLAWSON SPRING ST A-4	36	150S	080E	4300730637	12844	State	GW	P
CLAWSON SPRING ST D-5	31	150S	090E	4300730642	12852	State	GW	P
CLAWSON SPRING ST D-6	31	150S	090E	4300730643	12847	State	GW	P
CLAWSON SPRING ST D-7	31	150S	090E	4300730644	12849	State	GW	P
HELPER FED A-5	23	130S	100E	4300730677	13010	Federal	GW	P
HELPER FED A-7	22	130S	100E	4300730678	13346	Federal	GW	P
HELPER FED B-15	28	130S	100E	4300730679	13015	Federal	GW	P
HELPER FED B-16	28	130S	100E	4300730680	13203	Federal	GW	P
HELPER FED C-2	24	130S	100E	4300730681	13016	Federal	GW	P
HELPER FED C-4	24	130S	100E	4300730682	13012	Federal	GW	P
HELPER FED C-7	21	130S	100E	4300730684	13204	Federal	GW	P
HELPER FED D-9	25	130S	100E	4300730685	13245	Federal	GW	P
HELPER FED D-10	25	130S	100E	4300730686	12993	Federal	GW	P
HELPER FED D-11	25	130S	100E	4300730687	12992	Federal	GW	P
HELPER FED D-12	25	130S	100E	4300730688	13005	Federal	GW	P
HELPER FED E-4	29	130S	100E	4300730689	13229	Federal	GW	P

Anadarko Petroleum Corporation (N0035) to Anadarko E&P Onshore, LLC (N3940)
Effective1-April-2013

Well Name	Sec	Twnshp	Range	API	Entity No.	Lease Type	Well Type	Well status
HELPER FED A-4	23	130S	100E	4300730692	13009	Federal	GW	P
HELPER FED C-5	24	130S	100E	4300730693	13013	Federal	GW	P
HELPER FED G-1	30	130S	110E	4300730694	13006	Federal	GW	P
HELPER FED G-2	30	130S	110E	4300730695	13007	Federal	GW	P
HELPER FED G-3	31	130S	110E	4300730696	13002	Federal	GW	P
HELPER FED G-4	31	130S	110E	4300730697	13003	Federal	GW	P
HELPER FED H-3	01	140S	100E	4300730698	12831	Federal	GW	P
HELPER FED H-4	01	140S	100E	4300730699	12833	Federal	GW	P
CLAWSON SPRING ST D-8	31	150S	090E	4300730701	12851	State	GW	P
HELPER FED C-3	24	130S	100E	4300730702	13011	Federal	GW	P
CLAWSON SPRING ST J-1	35	150S	080E	4300730726	13299	Fee	GW	P
PIERUCCI 1	35	150S	080E	4300730727	13325	Fee	GW	P
POTTER ETAL 1	35	150S	080E	4300730728	12958	Fee	GW	P
POTTER ETAL 2	35	150S	080E	4300730737	12959	Fee	GW	P
HELPER FED G-5	30	130S	110E	4300730770	13655	Federal	GW	P
HELPER FED G-6	30	130S	110E	4300730771	13656	Federal	GW	P
HELPER FED G-7	31	130S	110E	4300730772	13657	Federal	GW	P
HELPER FED G-8	31	130S	110E	4300730773	13658	Federal	GW	P
GOODALL A-1	06	140S	110E	4300730774	13348	Fee	GW	P
HELPER FED E-8	19	130S	100E	4300730776	13624	Federal	GW	P
HAUSKNECHT A-1	21	130S	100E	4300730781	13347	Fee	GW	P
HELPER FED E-9	19	130S	100E	4300730868	13628	Federal	GW	P
HELPER FED E-5	20	130S	100E	4300730869	13625	Federal	GW	P
HELPER FED E-6	20	130S	100E	4300730870	13631	Federal	GW	P
HELPER FED E-10	30	130S	100E	4300730871	13629	Federal	GW	P
SACCOMANNO A-1	30	130S	100E	4300730872	13622	Fee	GW	P
HELPER FED E-11	30	130S	100E	4300730873	13630	Federal	GW	P
BLACKHAWK A-2	29	130S	100E	4300730886	13783	Fee	GW	P
BLACKHAWK A-3	20	130S	100E	4300730914	13794	Fee	GW	P
BLACKHAWK A-4	21	130S	100E	4300730915	13795	Fee	GW	P
BLACKHAWK A-1X	20	130S	100E	4300730923	13798	Fee	GW	P
HELPER STATE 12-3	03	140S	100E	4300750070	17824	State	GW	P
HELPER STATE 32-3	03	140S	100E	4300750071	17827	State	GW	P
HELPER STATE 32-36	36	130S	100E	4300750072	17825	State	GW	P
VEA 32-32	32	130S	100E	4300750075	17826	Fee	GW	P
CLAWSON SPRING ST E-7	07	160S	090E	4301530392	12960	State	GW	P
CLAWSON SPRING ST E-8	07	160S	090E	4301530394	12964	State	GW	P
CLAWSON SPRING ST E-3	06	160S	090E	4301530403	12965	State	GW	P
CLAWSON SPRING ST E-1	06	160S	090E	4301530404	12966	State	GW	P
CLAWSON SPRING ST E-2	06	160S	090E	4301530405	12961	State	GW	P
CLAWSON SPRING ST E-4	06	160S	090E	4301530406	12962	State	GW	P
CLAWSON SPRING ST C-1	12	160S	080E	4301530410	12617	State	GW	P
CLAWSON SPRING ST B-1	01	160S	080E	4301530427	12845	State	GW	P
CLAWSON SPRING ST B-2	01	160S	080E	4301530428	12846	State	GW	P
CLAWSON SPRING ST B-3	01	160S	080E	4301530429	12848	State	GW	P
CLAWSON SPRING ST B-4	01	160S	080E	4301530430	12854	State	GW	P
CLAWSON SPRING ST B-5	12	160S	080E	4301530431	12963	State	GW	P
CLAWSON SPRING ST B-8	11	160S	080E	4301530432	12863	State	GW	P
CLAWSON SPRING ST B-9	11	160S	080E	4301530433	12864	State	GW	P
CLAWSON SPRING ST C-2	12	160S	080E	4301530434	12850	State	GW	P

Anadarko Petroleum Corporation (N0035) to Anadarko E&P Onshore, LLC (N3940)
Effective1-April-2013

Well Name	Sec	Twnshp	Range	API	Entity No.	Lease Type	Well Type	Well status
CLAWSON SPRING ST C-4	14	160S	080E	4301530435	13199	State	GW	P
CLAWSON SPRING ST B-7	11	160S	080E	4301530460	12967	State	GW	P
CLAWSON SPRING ST C-6	14	160S	080E	4301530461	13355	State	GW	P
CLAWSON SPRING ST C-3	12	160S	080E	4301530463	12968	State	GW	P
CLAWSON SPRING ST B-6	11	160S	080E	4301530465	12969	State	GW	P
CLAWSON SPRING ST H-1	13	160S	080E	4301530466	13323	State	GW	P
CLAWSON SPRING ST H-2	13	160S	080E	4301530467	12955	State	GW	P
CLAWSON SPRING ST IPA-1	10	160S	080E	4301530468	12956	Fee	GW	P
CLAWSON SPRING ST IPA-2	15	160S	080E	4301530469	13200	Fee	GW	P
CLAWSON SPRING ST E-5	07	160S	090E	4301530470	12971	State	GW	P
CLAWSON SPRING ST G-1	02	160S	080E	4301530471	13014	State	GW	P
CLAWSON SPRING ST F-2	03	160S	080E	4301530472	13282	State	GW	P
CLAWSON SPRING ST F-1	03	160S	080E	4301530473	13278	State	GW	P
CLAWSON SPRING ST E-6	07	160S	090E	4301530474	13052	State	GW	P
CLAWSON SPRING ST G-2	02	160S	080E	4301530475	12957	State	GW	P
CLAWSON SPRING ST M-1	02	160S	080E	4301530488	13201	State	GW	P
CLAWSON SPRING ST K-1	02	160S	080E	4301530489	13202	State	GW	P
SHIMMIN TRUST 3	14	120S	100E	4300730119	11096	Fee	GW	PA
SHIMMIN TRUST 1	11	120S	100E	4300730120	11096	Fee	GW	PA
SHIMMIN TRUST 2	14	120S	100E	4300730121	11096	Fee	GW	PA
SHIMMIN TRUST 4	11	120S	100E	4300730123	11096	Fee	GW	PA
ST 9-16	16	120S	100E	4300730132	11402	State	GW	PA
ST 2-16	16	120S	100E	4300730133	11399	State	GW	PA
MATTS SUMMIT ST A-1	14	120S	090E	4300730141	11273	State	GW	PA
SLEMAKER A-1	05	120S	120E	4300730158	11441	Fee	GW	PA
JENSEN 16-10	10	120S	100E	4300730161	11403	Fee	GW	PA
JENSEN 7-15	15	120S	100E	4300730165	11407	Fee	GW	PA
SHIMMIN TRUST 12-12	12	120S	100E	4300730168	11420	Fee	GW	PA
JENSEN 11-15	15	120S	100E	4300730175	11425	Fee	GW	PA
BRYNER A-1	11	120S	120E	4300730188	11503	Fee	GW	PA
BRYNER A-1X (RIG SKID)	11	120S	120E	4300730209	11503	Fee	GW	PA
BLACKHAWK A-1	20	130S	100E	4300730885	13798	Fee	D	PA
BLACKHAWK A-5H	20	130S	100E	4300731402	17029	Fee	D	PA
CLAWSON SPRING ST SWD 3	06	160S	090E	4301530476	12978	State	D	PA
HELPER FED C-6	21	130S	100E	4300730683	13008	Federal	GW	S
UTAH 10-415	10	160S	080E	4301530391	12632	State	GW	TA

	API Well Number	Well Name	Qtr/Qtr	Section	Township	Range	Mineral Lease Type	Mineral Lease Number	Well Status
1	4300730189	HELPER FED B-1	NESW	33	13S	10E	Federal	USA UTU 71392	Producing
2	4300730190	HELPER FED A-1	C-SW	23	13S	10E	Federal	USA UTU 58434	Producing
3	4300730213	HELPER FED A-3	SESE	22	13S	10E	Federal	USA UTU 58434	Producing
4	4300730214	HELPER FED C-1	SENE	22	13S	10E	Federal	USA UTU 71391	Producing
5	4300730215	HELPER FED B-5	NENE	27	13S	10E	Federal	USA UTU 71392	Producing
6	4300730216	HELPER FED A-2	NESW	22	13S	10E	Federal	USA UTU 58434	Producing
7	4300730286	HELPER FED D-1	SWNE	26	13S	10E	Federal	USA UTU 68315	Producing
8	4300730378	HELPER FED F-3	NENE	8	14S	10E	Federal	USA UTU 65762	Producing
9	4300730379	HELPER FED F-4	NWNW	9	14S	10E	Federal	USA UTU 65762	Producing
10	4300730508	HELPER FED E-7	SESE	19	13S	10E	Federal	USA UTU 77980	Producing
11	4300730530	HELPER FED B-2	SENW	33	13S	10E	Federal	USA UTU 71392	Producing
12	4300730531	HELPER FED B-3	NESE	33	13S	10E	Federal	USA UTU 71392	Producing
13	4300730532	HELPER FED B-4	NENE	33	13S	10E	Federal	USA UTU 71392	Producing
14	4300730533	HELPER FED B-6	NENW	27	13S	10E	Federal	USA UTU 71392	Producing
15	4300730534	HELPER FED B-7	NESW	27	13S	10E	Federal	USA UTU 71392	Producing
16	4300730535	HELPER FED B-8	SESE	27	13S	10E	Federal	USA UTU 71392	Producing
17	4300730536	HELPER FED B-9	SENW	34	13S	10E	Federal	USA UTU 71392	Producing
18	4300730537	HELPER FED B-10	NWNE	34	13S	10E	Federal	USA UTU 71392	Producing
19	4300730538	HELPER FED B-11	SESW	34	13S	10E	Federal	USA UTU 71392	Producing
20	4300730539	HELPER FED B-12	NESE	34	13S	10E	Federal	USA UTU 71392	Producing
21	4300730540	HELPER FED B-13	SWSE	28	13S	10E	Federal	USA UTU 71392	Producing
22	4300730541	HELPER FED B-14	SWSW	28	13S	10E	Federal	USA UTU 71392	Producing
23	4300730542	HELPER FED D-2	SWNW	26	13S	10E	Federal	USA UTU 68315	Producing
24	4300730543	HELPER FED D-3	SESW	26	13S	10E	Federal	USA UTU 68315	Producing
25	4300730544	HELPER FED D-4	NWNW	35	13S	10E	Federal	USA UTU 68315	Producing
26	4300730545	HELPER FED D-5	SESW	35	13S	10E	Federal	USA UTU 68315	Producing
27	4300730546	HELPER FED D-6	NWSE	35	13S	10E	Federal	USA UTU 68315	Producing
28	4300730547	HELPER FED E-1	NESE	29	13S	10E	Federal	USA UTU 71675	Producing
29	4300730548	HELPER FED E-2	SESW	29	13S	10E	Federal	USA UTU 71675	Producing
30	4300730549	HELPER FED H-1	NENW	1	14S	10E	Federal	USA UTU 72352	Producing
31	4300730550	HELPER FED H-2	SESW	1	14S	10E	Federal	USA UTU 72352	Producing
32	4300730556	OLIVETO FED A-2	NESW	8	14S	10E	Federal	USA UTU 65762	Producing
33	4300730557	HELPER FED F-1	SESE	8	14S	10E	Federal	USA UTU 65762	Producing
34	4300730558	SMITH FED A-1	NWSW	9	14S	10E	Federal	USA UTU 65762	Producing
35	4300730593	HELPER FED A-6	SESE	23	13S	10E	Federal	USA UTU 58434	Producing
36	4300730594	HELPER FED D-7	C-SE	26	13S	10E	Federal	USA UTU 68315	Producing
37	4300730595	HELPER FED D-8	NENE	35	13S	10E	Federal	USA UTU 68315	Producing
38	4300730677	HELPER FED A-5	NENE	23	13S	10E	Federal	USA UTU 58434	Producing
39	4300730678	HELPER FED A-7	SENW	22	13S	10E	Federal	USA UTU 58434	Producing
40	4300730679	HELPER FED B-15	SENE	28	13S	10E	Federal	USA UTU 71392	Producing
41	4300730680	HELPER FED B-16	SWNW	28	13S	10E	Federal	USA UTU 71392	Producing
42	4300730681	HELPER FED C-2	NENW	24	13S	10E	Federal	USA UTU 71391	Producing

	API Well Number	Well Name	Qtr/Qtr	Section	Township	Range	Mineral Lease Type	Mineral Lease Number	Well Status
43	4300730682	HELPER FED C-4	NWSW	24	13S	10E	Federal	USA UTU 71391	Producing
44	4300730683	HELPER FED C-6	SWSE	21	13S	10E	Federal	USA UTU 71391	Shut-In
45	4300730684	HELPER FED C-7	SESW	21	13S	10E	Federal	USA UTU 71391	Producing
46	4300730685	HELPER FED D-9	NWNW	25	13S	10E	Federal	USA UTU 68315	Producing
47	4300730686	HELPER FED D-10	SENE	25	13S	10E	Federal	USA UTU 68315	Producing
48	4300730687	HELPER FED D-11	SESW	25	13S	10E	Federal	USA UTU 68315	Producing
49	4300730688	HELPER FED D-12	SESE	25	13S	10E	Federal	USA UTU 68315	Producing
50	4300730689	HELPER FED E-4	NWNE	29	13S	10E	Federal	USA UTU 71675	Producing
51	4300730692	HELPER FED A-4	SWNW	23	13S	10E	Federal	USA UTU 58434	Producing
52	4300730693	HELPER FED C-5	SWNE	24	13S	10E	Federal	USA UTU 71391	Producing
53	4300730694	HELPER FED G-1	C-NW	30	13S	11E	Federal	USA UTU 71677	Producing
54	4300730695	HELPER FED G-2	SWSW	30	13S	11E	Federal	USA UTU 71677	Producing
55	4300730696	HELPER FED G-3	SENW	31	13S	11E	Federal	USA UTU 71677	Producing
56	4300730697	HELPER FED G-4	SESW	31	13S	11E	Federal	USA UTU 71677	Producing
57	4300730698	HELPER FED H-3	SWNE	1	14S	10E	Federal	USA UTU 72352	Producing
58	4300730699	HELPER FED H-4	NESE	1	14S	10E	Federal	USA UTU 72352	Producing
59	4300730702	HELPER FED C-3	SESW	24	13S	10E	Federal	USA UTU 71391	Producing
60	4300730770	HELPER FED G-5	SWNE	30	13S	11E	Federal	USA UTU 71677	Producing
61	4300730771	HELPER FED G-6	SWSE	30	13S	11E	Federal	USA UTU 71677	Producing
62	4300730772	HELPER FED G-7	NWNE	31	13S	11E	Federal	USA UTU 71677	Producing
63	4300730773	HELPER FED G-8	NESE	31	13S	11E	Federal	USA UTU 71677	Producing
64	4300730776	HELPER FED E-8	SENE	19	13S	10E	Federal	USA UTU 77980	Producing
65	4300730868	HELPER FED E-9	SESW	19	13S	10E	Federal	USA UTU 77980	Producing
66	4300730869	HELPER FED E-5	SWSW	20	13S	10E	Federal	USA UTU 71675	Producing
67	4300730870	HELPER FED E-6	SWNW	20	13S	10E	Federal	USA UTU 71675	Producing
68	4300730871	HELPER FED E-10	NENW	30	13S	10E	Federal	USA UTU 71675	Producing
69	4300730873	HELPER FED E-11	NWNE	30	13S	10E	Federal	USA UTU 71675	Producing
70	4300730119	SHIMMIN TRUST 3	SENW	14	12S	10E	Fee (Private)		Plugged and Abandoned
71	4300730120	SHIMMIN TRUST 1	SESE	11	12S	10E	Fee (Private)		Plugged and Abandoned
72	4300730121	SHIMMIN TRUST 2	SENE	14	12S	10E	Fee (Private)		Plugged and Abandoned
73	4300730123	SHIMMIN TRUST 4	SESW	11	12S	10E	Fee (Private)		Plugged and Abandoned
74	4300730158	SLEMAKER A-1	SWNE	5	12S	12E	Fee (Private)		Plugged and Abandoned
75	4300730161	JENSEN 16-10	SESE	10	12S	10E	Fee (Private)		Plugged and Abandoned
76	4300730165	JENSEN 7-15	SWNE	15	12S	10E	Fee (Private)		Plugged and Abandoned
77	4300730168	SHIMMIN TRUST 12-12	NWSW	12	12S	10E	Fee (Private)		Plugged and Abandoned
78	4300730175	JENSEN 11-15	NESW	15	12S	10E	Fee (Private)		Plugged and Abandoned
79	4300730188	BRYNER A-1	NESE	11	12S	12E	Fee (Private)		Plugged and Abandoned
80	4300730209	BRYNER A-1X (RIG SKID)	NESE	11	12S	12E	Fee (Private)		Plugged and Abandoned
81	4300730348	BIRCH A-1	NWSW	5	14S	10E	Fee (Private)		Producing
82	4300730352	CHUBBUCK A-1	NESE	31	13S	10E	Fee (Private)		Producing
83	4300730353	VEA A-1	SWNW	32	13S	10E	Fee (Private)		Producing
84	4300730354	VEA A-2	NENE	32	13S	10E	Fee (Private)		Producing

	API Well Number	Well Name	Qtr/Qtr	Section	Township	Range	Mineral Lease Type	Mineral Lease Number	Well Status
85	4300730355	VEA A-3	SESW	32	13S	10E	Fee (Private)		Producing
86	4300730356	VEA A-4	NWSE	32	13S	10E	Fee (Private)		Producing
87	4300730372	BIRCH A-2	NWNW	8	14S	10E	Fee (Private)		Producing
88	4300730570	SE INVESTMENTS A-1	NESE	6	14S	10E	Fee (Private)		Producing
89	4300730586	HARMOND A-1	SENE	7	14S	10E	Fee (Private)		Producing
90	4300730604	CHUBBUCK A-2	SENW	6	14S	10E	Fee (Private)		Producing
91	4300730726	CLAWSON SPRING ST J-1	SESW	35	15S	8E	Fee (Private)		Producing
92	4300730727	PIERUCCI 1	SENW	35	15S	8E	Fee (Private)		Producing
93	4300730728	POTTER ETAL 1	SWNE	35	15S	8E	Fee (Private)		Producing
94	4300730737	POTTER ETAL 2	NESE	35	15S	8E	Fee (Private)		Producing
95	4300730774	GOODALL A-1	NWSW	6	14S	11E	Fee (Private)		Producing
96	4300730781	HAUSKNECHT A-1	SWNW	21	13S	10E	Fee (Private)		Producing
97	4300730872	SACCOMANNO A-1	NESE	30	13S	10E	Fee (Private)		Producing
98	4300730885	BLACKHAWK A-1	SESE	20	13S	10E	Fee (Private)		Plugged and Abandoned
99	4300730886	BLACKHAWK A-2	NWNW	29	13S	10E	Fee (Private)		Producing
100	4300730914	BLACKHAWK A-3	SENE	20	13S	10E	Fee (Private)		Producing
101	4300730915	BLACKHAWK A-4	NENE	21	13S	10E	Fee (Private)		Producing
102	4300730923	BLACKHAWK A-1X	SESE	20	13S	10E	Fee (Private)		Producing
103	4300731402	BLACKHAWK A-5H	NENE	20	13S	10E	Fee (Private)		Plugged and Abandoned
104	4300750075	VEA 32-32	SWNE	32	13S	10E	Fee (Private)		Producing
105	4301530468	CLAWSON SPRING ST IPA-1	SESE	10	16S	8E	Fee (Private)		Producing
106	4301530469	CLAWSON SPRING ST IPA-2	NENE	15	16S	8E	Fee (Private)		Producing
107	4300730132	ST 9-16	NESE	16	12S	10E	State	ML-44443	Plugged and Abandoned
108	4300730133	ST 2-16	NWNE	16	12S	10E	State	ML-44443	Plugged and Abandoned
109	4300730141	MATTS SUMMIT ST A-1	NWNW	14	12S	9E	State	ML-44496	Plugged and Abandoned
110	4300730349	HELPER ST A-1	SENW	3	14S	10E	State	ST UT ML 45805	Producing
111	4300730350	HELPER ST D-7	NWSW	4	14S	10E	State	ST UT ML 45804	Producing
112	4300730357	HELPER ST A-8	NWSE	2	14S	10E	State	ST UT ML 45805	Producing
113	4300730358	HELPER ST A-3	NWNW	2	14S	10E	State	ST UT ML 45805	Producing
114	4300730359	HELPER ST A-4	NWNE	2	14S	10E	State	ST UT ML 45805	Producing
115	4300730360	HELPER ST A-7	NESW	2	14S	10E	State	ST UT ML 45805	Producing
116	4300730362	HELPER ST A-2	NENE	3	14S	10E	State	ST UT ML 45805	Producing
117	4300730363	HELPER ST A-5	NESW	3	14S	10E	State	ST UT ML 45805	Producing
118	4300730364	HELPER ST A-6	NESE	3	14S	10E	State	ST UT ML 45805	Producing
119	4300730365	HELPER ST D-4	SWNW	4	14S	10E	State	ST UT ML 45804	Producing
120	4300730366	HELPER ST D-3	NENE	5	14S	10E	State	ST UT ML 45804	Producing
121	4300730367	HELPER ST D-5	NWNE	4	14S	10E	State	ST UT ML 45804	Producing
122	4300730368	HELPER ST D-8	SESE	4	14S	10E	State	ST UT ML 45804	Producing
123	4300730369	HELPER ST D-2	NENW	5	14S	10E	State	ST UT ML 45804	Producing
124	4300730370	HELPER ST D-6	SESE	5	14S	10E	State	ST UT ML 45804	Producing
125	4300730371	HELPER ST D-1	NENE	6	14S	10E	State	ST UT ML 45804	Producing
126	4300730373	HELPER ST A-9	SENW	10	14S	10E	State	ST UT ML 45805	Producing

	API Well Number	Well Name	Qtr/Qtr	Section	Township	Range	Mineral Lease Type	Mineral Lease Number	Well Status
127	4300730376	HELPER ST B-1	SWNE	9	14S	10E	State	ST UT ML 47556	Producing
128	4300730433	HELPER ST A-10	NWNE	10	14S	10E	State	ST UT ML 45805	Producing
129	4300730434	HELPER ST A-11	SWNW	11	14S	10E	State	ST UT ML 45805	Producing
130	4300730435	HELPER ST A-12	NWSW	10	14S	10E	State	ST UT ML 45805	Producing
131	4300730436	HELPER ST A-13	NESE	10	14S	10E	State	ST UT ML 45805	Producing
132	4300730437	HELPER ST B-2	NESE	9	14S	10E	State	ST UT ML 47556	Producing
133	4300730571	HELPER ST A-14	SESW	11	14S	10E	State	ST UT ML 45805	Producing
134	4300730572	HELPER ST A-15	SENE	11	14S	10E	State	ST UT ML 45805	Producing
135	4300730573	HELPER ST E-1	SESW	36	13S	10E	State	ST UT ML 45802	Producing
136	4300730574	HELPER ST E-2	SWNW	36	13S	10E	State	ST UT ML 45802	Producing
137	4300730592	HELPER ST E-3	NENE	36	13S	10E	State	ST UT ML 45802	Producing
138	4300730597	CLAWSON SPRING ST A-1	SWSE	36	15S	8E	State	ST UT ML 46106	Producing
139	4300730598	HELPER ST E-4	SWSE	36	13S	10E	State	ST UT ML 45802	Producing
140	4300730603	HELPER ST A-16	SWSE	11	14S	10E	State	ST UT ML 45805	Producing
141	4300730635	CLAWSON SPRING ST A-2	NWNW	36	15S	8E	State	ST UT ML 46106	Producing
142	4300730636	CLAWSON SPRING ST A-3	NESW	36	15S	8E	State	ST UT ML 46106	Producing
143	4300730637	CLAWSON SPRING ST A-4	NWNE	36	15S	8E	State	ST UT ML 46106	Producing
144	4300730642	CLAWSON SPRING ST D-5	NENW	31	15S	9E	State	ML-48226	Producing
145	4300730643	CLAWSON SPRING ST D-6	SWSW	31	15S	9E	State	ML-48226	Producing
146	4300730644	CLAWSON SPRING ST D-7	NWNE	31	15S	9E	State	ML-48226	Producing
147	4300730701	CLAWSON SPRING ST D-8	NWSE	31	15S	9E	State	ML-48226	Producing
148	4300750070	HELPER STATE 12-3	SWNW	3	14S	10E	State	ST UT ML 45805	Producing
149	4300750071	HELPER STATE 32-3	SWNE	3	14S	10E	State	ST UT ML 45805	Producing
150	4300750072	HELPER STATE 32-36	SWNE	36	13S	10E	State	ST UT ML 45802	Producing
151	4301530391	UTAH 10-415	NENE	10	16S	8E	State	ST UT ML 48189	Temporarily-Abandoned
152	4301530392	CLAWSON SPRING ST E-7	SENE	7	16S	9E	State	ST UT ML 48220-A	Producing
153	4301530394	CLAWSON SPRING ST E-8	SWSE	7	16S	9E	State	ST UT ML 48220-A	Producing
154	4301530403	CLAWSON SPRING ST E-3	SENE	6	16S	9E	State	ST UT ML 48220-A	Producing
155	4301530404	CLAWSON SPRING ST E-1	SENW	6	16S	9E	State	ST UT ML 48220-A	Producing
156	4301530405	CLAWSON SPRING ST E-2	NESW	6	16S	9E	State	ST UT ML 48220-A	Producing
157	4301530406	CLAWSON SPRING ST E-4	NWSE	6	16S	9E	State	ST UT ML 48220-A	Producing
158	4301530410	CLAWSON SPRING ST C-1	SWNW	12	16S	8E	State	ST UT UO 48209	Producing
159	4301530427	CLAWSON SPRING ST B-1	NENW	1	16S	8E	State	ST UT ML 48216	Producing
160	4301530428	CLAWSON SPRING ST B-2	NWSW	1	16S	8E	State	ST UT ML 48216	Producing
161	4301530429	CLAWSON SPRING ST B-3	NWNE	1	16S	8E	State	ST UT ML 48216	Producing
162	4301530430	CLAWSON SPRING ST B-4	SESE	1	16S	8E	State	ST UT ML 48216	Producing
163	4301530431	CLAWSON SPRING ST B-5	SWSW	12	16S	8E	State	ST UT ML 48216	Producing
164	4301530432	CLAWSON SPRING ST B-8	SENE	11	16S	8E	State	ST UT ML 48216	Producing
165	4301530433	CLAWSON SPRING ST B-9	NWSE	11	16S	8E	State	ST UT ML 48216	Producing
166	4301530434	CLAWSON SPRING ST C-2	SENE	12	16S	8E	State	ST UT UO 48209	Producing
167	4301530435	CLAWSON SPRING ST C-4	SWNW	14	16S	8E	State	ST UT UO 48209	Producing
168	4301530460	CLAWSON SPRING ST B-7	NWSW	11	16S	8E	State	ST UT ML 48216	Producing

	API Well Number	Well Name	Qtr/Qtr	Section	Township	Range	Mineral Lease Type	Mineral Lease Number	Well Status
169	4301530461	CLAWSON SPRING ST C-6	SENE	14	16S	8E	State	ST UT UO 48209	Producing
170	4301530463	CLAWSON SPRING ST C-3	C-SE	12	16S	8E	State	ST UT UO 48209	Producing
171	4301530465	CLAWSON SPRING ST B-6	NENW	11	16S	8E	State	ST UT ML 48216	Producing
172	4301530466	CLAWSON SPRING ST H-1	NENW	13	16S	8E	State	ST UT ML 48217-A	Producing
173	4301530467	CLAWSON SPRING ST H-2	NENE	13	16S	8E	State	ST UT ML 48217-A	Producing
174	4301530470	CLAWSON SPRING ST E-5	NENW	7	16S	9E	State	ST UT ML 48220-A	Producing
175	4301530471	CLAWSON SPRING ST G-1	NWNW	2	16S	8E	State	ST UT ML 46314	Producing
176	4301530472	CLAWSON SPRING ST F-2	NESE	3	16S	8E	State	ST UT ML 48515	Producing
177	4301530473	CLAWSON SPRING ST F-1	SENE	3	16S	8E	State	ST UT ML 48514	Producing
178	4301530474	CLAWSON SPRING ST E-6	SESW	7	16S	9E	State	ST UT ML 48220-A	Producing
179	4301530475	CLAWSON SPRING ST G-2	NESW	2	16S	8E	State	ST UT ML 46314	Producing
180	4301530488	CLAWSON SPRING ST M-1	NWNE	2	16S	8E	State	ST UT ML 47561	Producing
181	4301530489	CLAWSON SPRING ST K-1	SESE	2	16S	8E	State	ST UT ML 46043	Producing